



Annual Water Users Briefing

August 21, 2024

YOUR WATER. YOUR FUTURE.

Welcome

DARRIN FRANCOM—ASSISTANT GENERAL MANAGER

- 2025 Water Rates/"Big R" (*Doug Dunlap – 15 min*)
- 2025 Colorado River Update (*Nolie Templeton – 20 min*)
- Outlook for the 2025 CAP Delivery Supply (*Don Crandall – 15 min*)
- Water Quality/Biology Report (*Scott Bryan – 15 min*)
- Break (*10 min*)
- 2024/2025 Maintenance Operations (*Robert Hitchcock – 15 min*)
- 2025 Capital Improvement Program Update (*Ryan Johnson – 10 min*)
- 2025 CAP Energy Outlook (*Jeff Ritter – 10 min*)
- Discussion/ Questions (*10 min*)
- Closing

2025 Water Rates / “Big R”

DOUG DUNLAP – FINANCE AND ACCOUNTING MANAGER

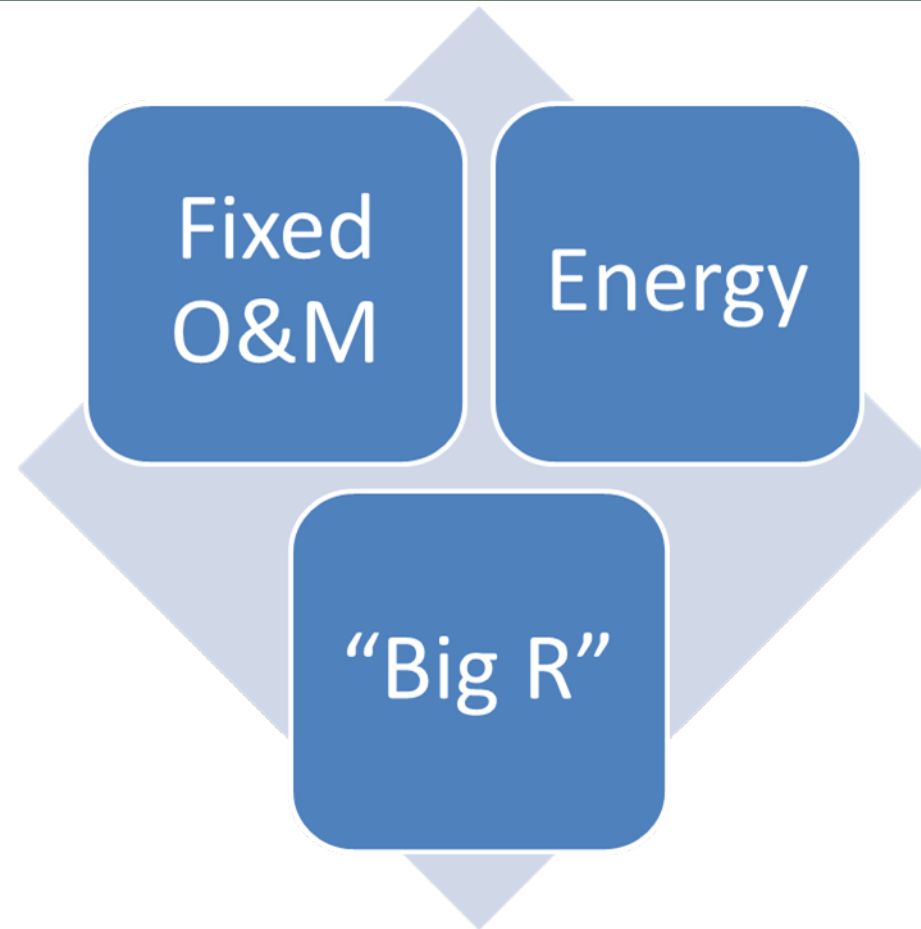
Key Rate Assumptions

- ✓ Water rates are set to recover costs, on a long-term basis, net of other revenue
- ✓ Billed water delivery estimates are 900,000 acre-feet after conservation efforts
- ✓ Projects funded from Extraordinary Cost Reserve or alternative source will be excluded from Fixed OM&R as identified in budget & 2024 Extraordinary Cost Reserve update
- ✓ Non-project water anticipated for 2025-forward, though becomes part of total delivery volume
- ✓ No additional Non-Indian Ag (NIA) reallocation included in rate period
- ✓ CAWCD Board approved 1-cent of 2024/2025 taxes or \$7.2 million towards repayment, which resulted in lowering the 2026 capital charge by \$11/acre-foot

CAP Water Delivery Rate Components

Operational costs
(salaries & related,
outside services,
materials and
supplies, etc.)

- calculated on annual basis



Power costs
calculated on annual
basis

- Customers billed directly for each acre-foot taken (vs. take-or-pay)

Capital expenditures & major maintenance component.

- smoothed over time

Rate Updates

- ✓ "Big R" rate will be adjusted in reconciliation to be in alignment with billed water volumes to correspond with expected "Big R" annual collections
- ✓ Rates will be published according to billed water volumes, moving away from published shortage tiers
 - Rates will be published at a billed water volume of 900,000 acre-feet
 - Rates for billed water volumes between 700,000 - 1,100,000 acre-feet will be published in 100,000 increments at the end of the rate schedule
 - Reduces confusion of Tier levels and implications of conservation programs

Rate Components

Units = \$/acre-foot	Firm 2024	Firm 2025	Provisional 2026	Advisory			
				2027	2028	2029	2030
Capital Charges							
(A) M&I – Long Term Subcontract	\$53	\$54	\$56	\$64	\$64	\$61	\$59
Delivery Charges – 900KAF for 2025-2030							
Fixed O&M	\$145	\$160	\$166	\$164	\$177	\$184	\$194
"Big R"	\$47	\$40	\$40	\$41	\$41	\$44	\$46
(B) Fixed OM&R	\$192	\$200	\$206	\$205	\$218	\$228	\$240
(C) Pumping Energy Rate	\$78	\$95	\$98	\$101	\$104	\$107	\$110
(D) 2020 Voluntary Rate Stabilization	\$ (11)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

“Big R”

(Millions, except where noted)	2024	2025	2026	2027	2028	2029	2030
Total "Big R" Capital	\$ 28.0	\$ 23.5	\$ 31.6	\$ 31.6	\$ 29.8	\$ 37.4	\$ 46.1
Transmission Projects:							
Debt Service	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Extraordinary Maintenance	2.5	2.5	1.5	10.0	-	6.0	-
"Big R" Spending	\$ 34.1	\$ 29.6	\$ 36.7	\$ 45.2	\$ 33.4	\$ 47.0	\$ 49.7
Billed Water Volume (KAF)	900	900	900	900	900	900	900
Calculated "Big R" Rate per year (\$/AF)	\$ 37.83	\$ 32.91	\$ 40.84	\$ 50.24	\$ 37.19	\$ 52.30	\$ 55.22
Published "Big R" Rate (\$/AF)	\$ 47.00	\$ 40.00	\$ 40.00	\$ 41.00	\$ 41.00	\$ 44.00	\$ 46.00
Expected Annual Collection (\$M)	\$ 42.3	\$ 36.0	\$ 36.0	\$ 36.9	\$ 36.9	\$ 39.6	\$ 41.4

Water Delivery Rate Reconciliation

	Firm <u>2024</u>	Firm <u>2025</u>	Provisional <u>2026</u>	Advisory			
				<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>
900,000 acre-feet for 2025-2030							
Water Delivery Costs (\$Thousands)							
Fixed O&M Expenses	129,543	143,132	149,032	146,716	159,160	165,394	173,737
Total Pumping Energy Expenses	70,218	84,773	86,937	90,239	93,109	96,088	98,771
Water Deliveries (Acre-Feet)							
Total water deliveries with credits	900,000	900,000	900,000	900,000	900,000	900,000	900,000
Take or Pay adjustment	-	-	-	-	-	-	-
Billed Fixed OM&R Water Volume	900,000	900,000	900,000	900,000	900,000	900,000	900,000
Pumping Energy Rate 1 Water Volume	900,000	900,000	900,000	900,000	900,000	900,000	900,000
Water Delivery Rate (\$/AF)							
Calculated Fixed O&M Rate	145.00	160.00	166.00	164.00	177.00	184.00	194.00
Capital Replacement Component ("Big R")	47.00	40.00	40.00	41.00	41.00	44.00	46.00
Total Fixed OM&R	192.00	200.00	206.00	205.00	218.00	228.00	240.00
Total Pumping Energy Rate 1	78.00	95.00	98.00	101.00	104.00	107.00	110.00
Total Delivery Rate	270.00	295.00	304.00	306.00	322.00	335.00	350.00

Fixed OM&R Rates at Alternate Billed Water Delivery Volumes

(\$/acre-foot)						
Acre-feet	2025	2026	2027	2028	2029	2030
700,000	\$257	\$265	\$263	\$281	\$294	\$309
800,000	\$224	\$232	\$231	\$246	\$257	\$270
900,000	\$200	\$206	\$205	\$218	\$228	\$240
1,000,000	\$180	\$186	\$184	\$197	\$206	\$216
1,100,000	\$164	\$169	\$168	\$179	\$187	\$196

Rate Schedule

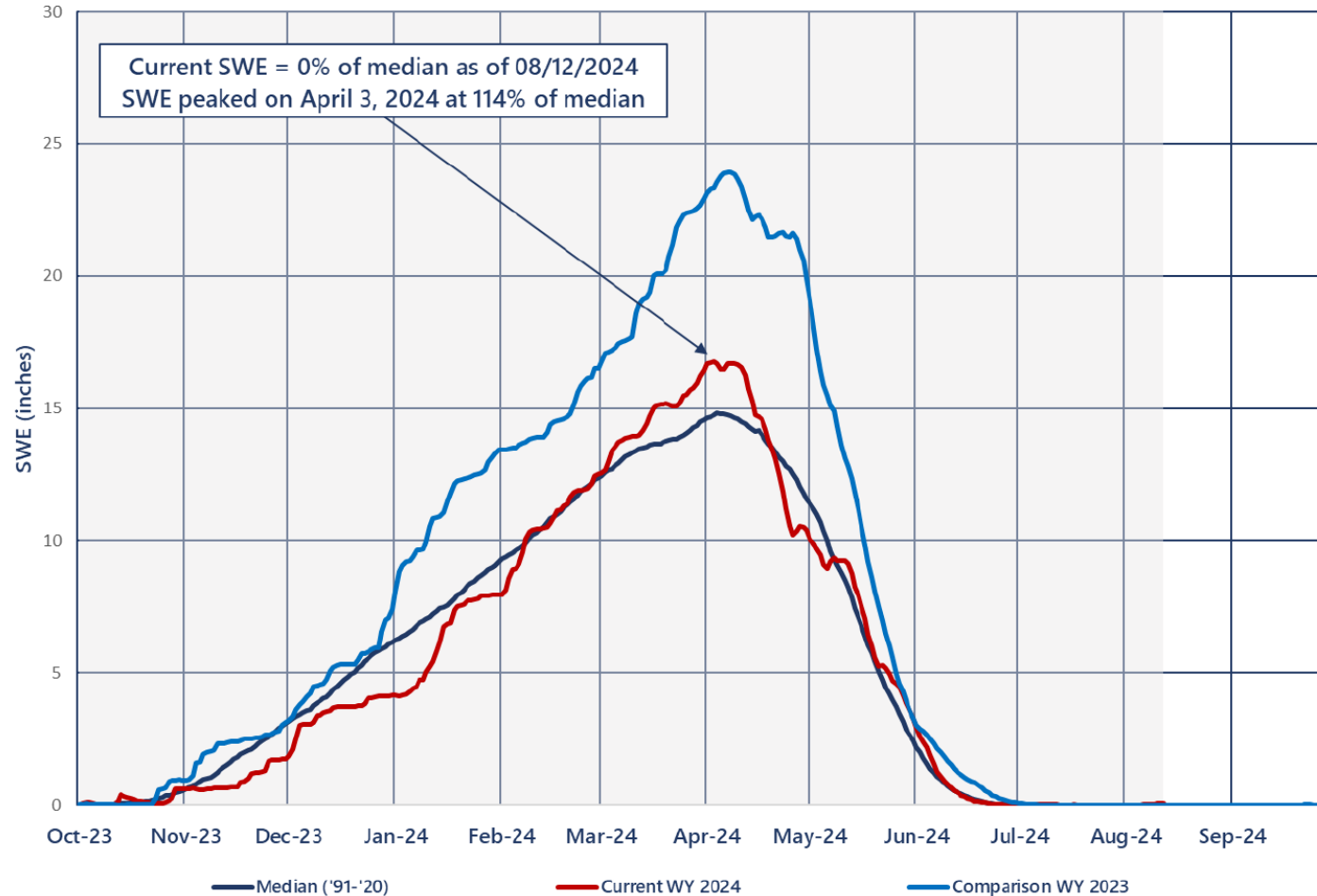
Units = \$/acre-foot The letter designations in the formulas refer to the Rates Components above	Advisory						
	Firm 2024	Firm 2025	Provisional 2026	2027	2028	2029	2030
M&I Subcontract (B + C)	\$270	\$295	\$304	\$306	\$322	\$335	\$350
Federal Contract (B + C)	\$270	\$295	\$304	\$306	\$322	\$335	\$350
Ag Settlement Pool (C)	\$78	\$95	\$98	\$101	\$104	\$107	\$110
Excess (A + B + C)	\$323	\$349	\$360	\$370	\$386	\$396	\$409

2025 Colorado River Update

NOLIE TEMPLETON – COLORADO RIVER PROGRAMS PLANNING ANALYST

BOR Snowpack

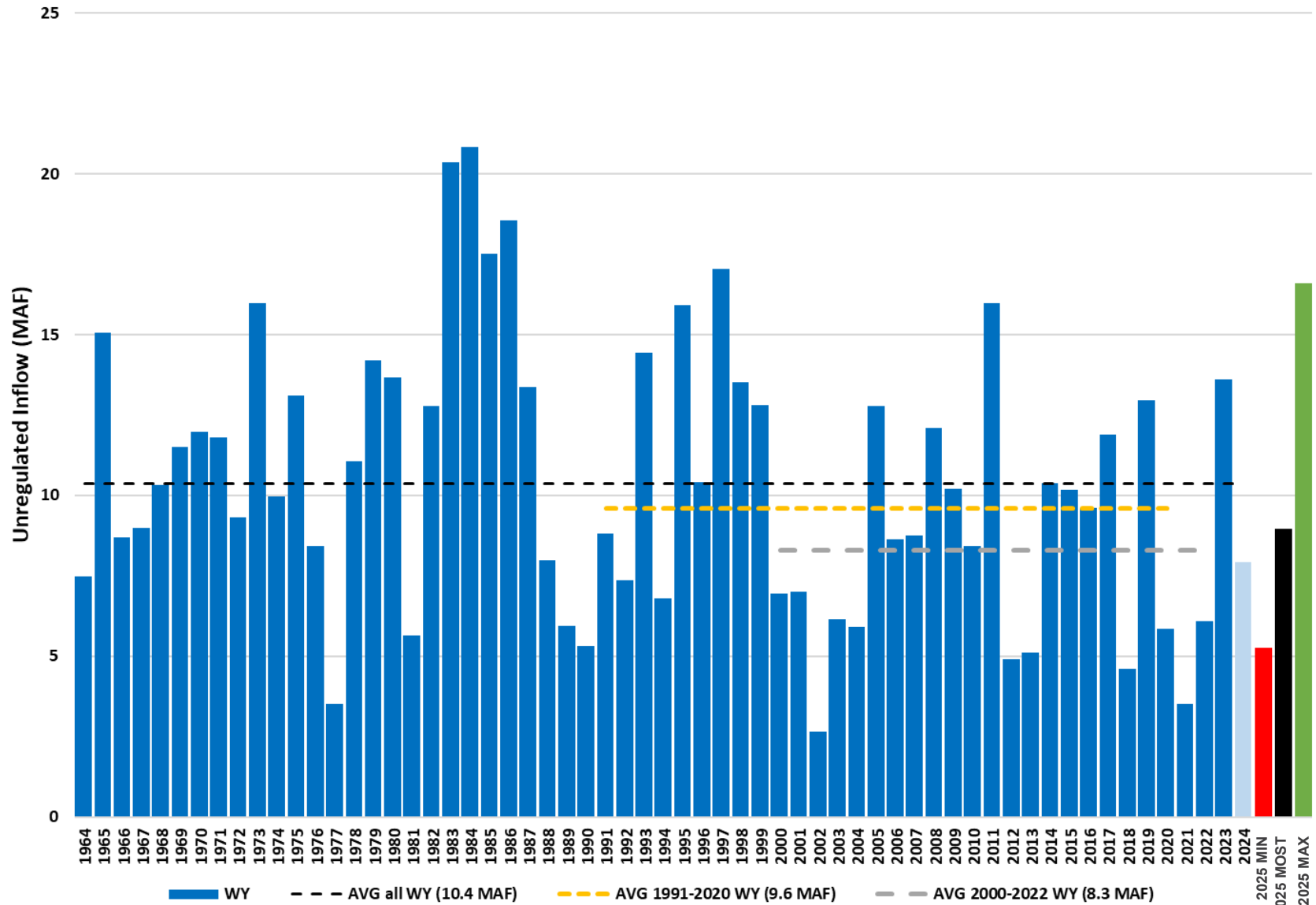
Colorado River Basin above Lake Powell



Snowpack vs. Runoff		
	Snowpack	Runoff
2020	105%	61%
2021	86%	37%
2022	90%	63%
2023	161%	140%
2024*	114%	83%*

*August Forecast dated 8/1/2024

Unregulated Inflow to Lake Powell by WY (1964-2023)



Water Year 2024¹
 August 1 Projection = 7.94 MAF (83%)

Water Year 2025 Forecast¹
 Aug Min Prob = 5.25 MAF (55%)
 Aug Most Prob = 8.97 MAF (93%)
 Aug Max Prob = 16.60 MAF (173%)

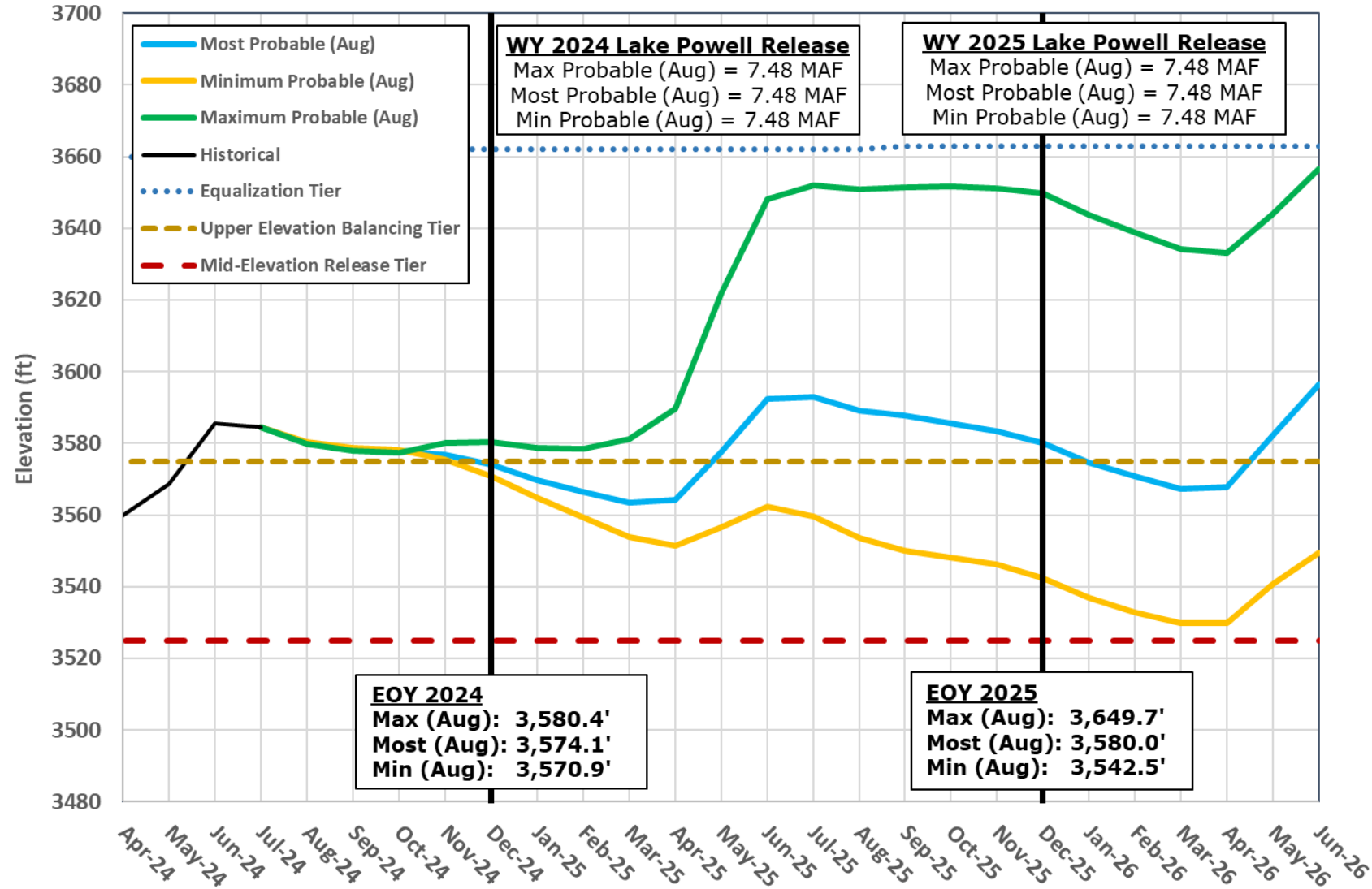


¹Water Year statistics are based on the 30-year period of record from 1991-2020, Average 1991-2020 – 9.60 maf

Lake Powell August 2024 24-Month Study

- Lake Powell release in WY2024 is 7.48 MAF
- WY2025 Lake Powell release will be 7.48 MAF

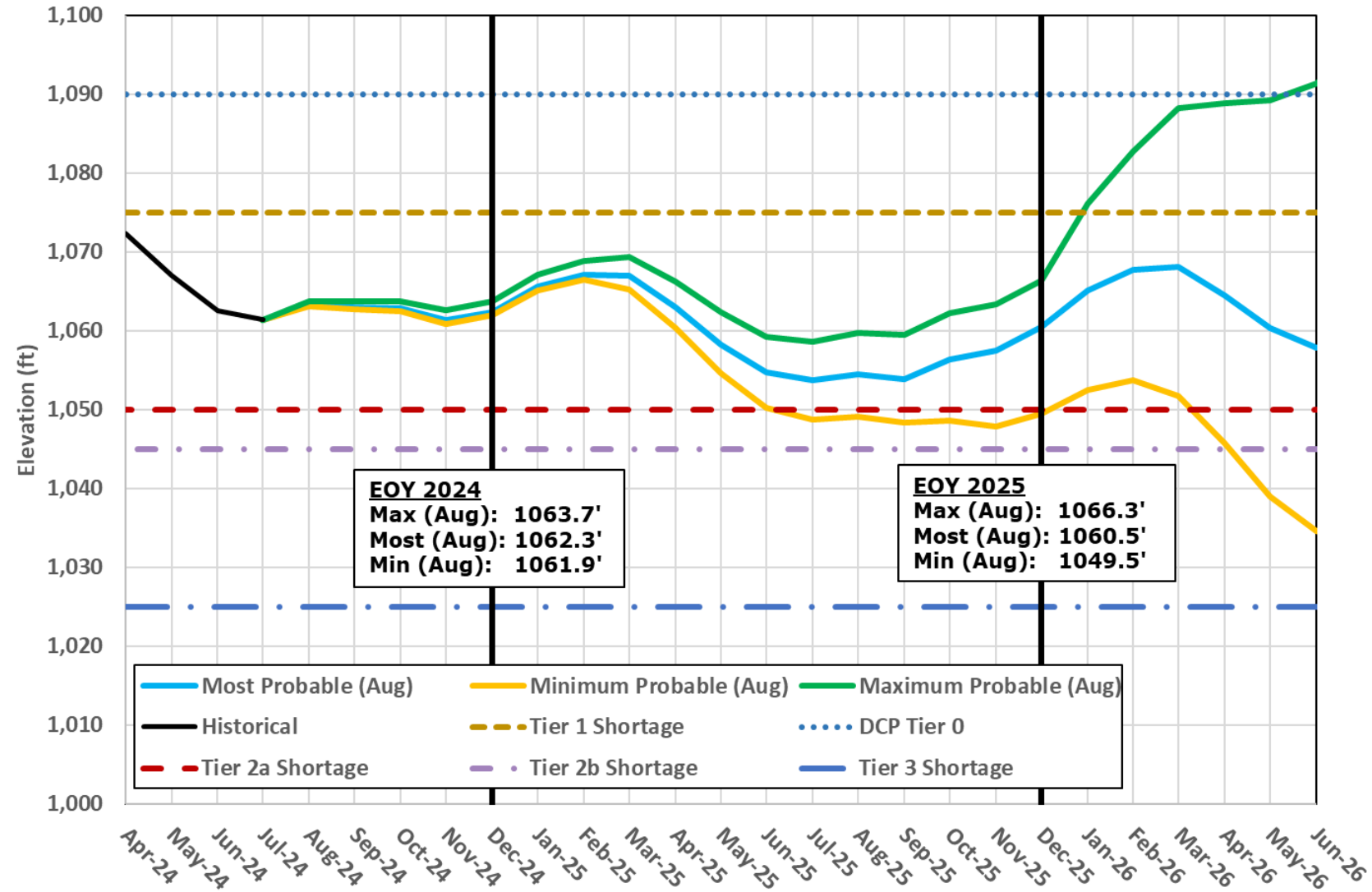
Lake Powell End of Month Elevations
(August 2024 24-Month Study)



Lake Mead August 2024 24-Month Study

- Lake Mead is operating in Tier 1 shortage condition in 2024
- Lake Mead will be in Tier 1 for 2025

Lake Mead End of Month Elevations
(August 2024 24-Month Study)



2007 Interim Guidelines, Minute 323, Lower Basin Drought Contingency Plan, and Binational Water Scarcity Contingency Plan

Total Volumes (kaf)

Lake Mead Elevation (feet msl)	2007 Interim Guidelines Shortages		Minute 323 Delivery Reductions	Total Combined Reductions	DCP Water Savings Contributions			Binational Water Scarcity Contingency Plan Savings	Combined Volumes by Country <i>US: (2007 Interim Guidelines Shortages + DCP Contributions)</i> <i>Mexico: (Minute 323 Delivery Reductions + Binational Water Scarcity Contingency Plan Savings)</i>					Total Combined Volumes
	AZ	NV	Mexico	<i>Lower Basin States + Mexico</i>	AZ	NV	CA	Mexico	AZ Total	NV Total	CA Total	<i>Lower Basin States Total</i>	<i>Mexico Total</i>	<i>Lower Basin States + Mexico</i>
1,090 - 1,075	0	0	0	0	192	8	0	41	192	8	0	200	41	241
1,075 - 1,050	320	13	50	383	192	8	0	30	512	21	0	533	80	613
1,050 - 1,045	400	17	70	487	192	8	0	34	592	25	0	617	104	721
1,045 - 1,040	400	17	70	487	240	10	200	76	640	27	200	867	146	1,013
1,040 - 1,035	400	17	70	487	240	10	250	84	640	27	250	917	154	1,071
1,035 - 1,030	400	17	70	487	240	10	300	92	640	27	300	967	162	1,129
1,030 - 1,025	400	17	70	487	240	10	350	101	640	27	350	1,017	171	1,188
<1,025	480	20	125	625	240	10	350	150	720	30	350	1,100	275	1,375

Tier 1
2025 Reductions+
Contributions

Tier 2a

Tier 2b

Tier 2c

Tier 2d

Tier 2e

Tier 3

Colorado River Basin Storage

(as of Aug 15, 2024)

Reservoir	Percent Full	Storage (maf)	Elevation (feet)
Lake Powell	41%	9.50	3,582
Lake Mead	33%	8.57	1,061
Total System Storage	44%	25.8	- - -

Total system storage was 44% of capacity, or 25.7 maf in storage, at this time last year.

Supplemental EIS Record of Decision

On May 9, 2024, the Department of Interior signed a new Record of Decision (ROD) to implement the Lower Basin's commitment to conserve 3 million acre-feet to address critical elevations in Lakes Powell and Mead in the near term through 2026.

Mead Operations

- Reservoir Protection Conservation
- Compensated System Conservation
- ICS
- Other compensated or uncompensated water

Powell Releases

- If Powell is operating below 3,575' and any 24 MS Min Probable shows Powell below 3,500', BOR will begin planning to reduce releases not less than 6 MAF

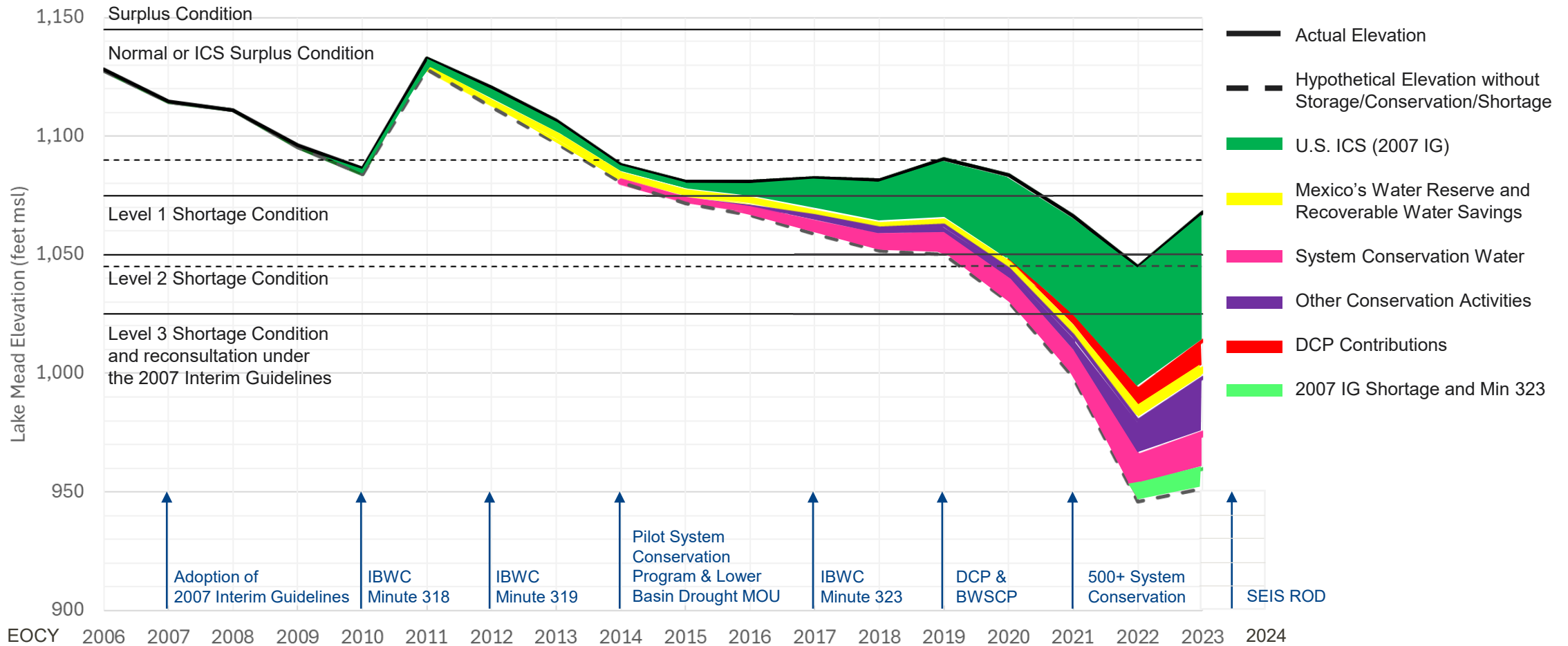
Consultation

- If April 24 MS Min Probable projects Mead below 1,025', Lower Basin States will submit an implementation plan within 45 days

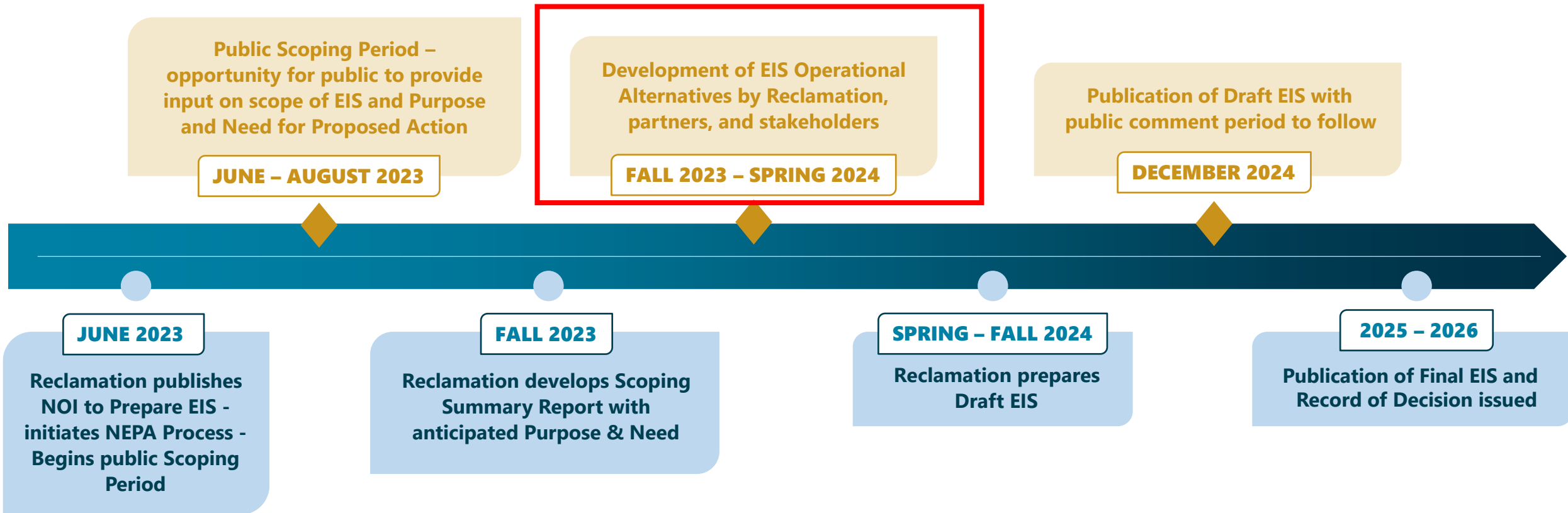
System Conservation Commitments

State	Conservation Activity (ac-ft)	2023	2024	2025	2026	Total
AZ	Fort McDowell Yavapai Nation	13,933	13,933	13,933		41,799
	Gila River Indian Community	91,319	125,000	125,000		341,319
	Hopi Tribe	2,679	3,059	3,059		8,797
	San Carlos Apache Tribe	23,804				23,804
	CAP Subcontractors	141,400	129,400	128,800	2,400	402,000
	ADWR-CAP ICS Preservation Program	41,776				41,776
	Mohave Valley Irrigation and Drainage District	12,819	13,441	13,441		39,701
	Yuma Mesa Irrigation and Drainage District	21,556	21,795	21,795		65,146
	Cibola Valley Irrigation and Drainage District	1,682	2,328	2,328		6,338
	Cathcart Farms	57	61	61		179
GM Gabrych Family	3,240	3,240	3,240		9,720	
CA	Coachella Valley Water District	35,000	36,063	45,000	10,000	126,063
	Quechan Tribe-MET	13,000	13,000	13,000		39,000
	Palo Verde Irrigation District	71,507	117,021	117,021	79,830	385,379
	Imperial Irrigation District	106,111				106,111
	MET EC- ICS	450,000				450,000
	MET - Conservation left in Lake Mead (non-ICS)	25,066	41,928			66,994
NV	SNWA Tributary Conservation ICS	36,075	36,000	30,000	30,000	132,075
	SNWA Conservation left in Lake Mead (non-ICS)	88,156	90,000	40,000	35,000	253,156
	Annual Total	1,179,180	646,269	556,678	157,230	2,539,357
	Cumulative Total	1,179,180	1,825,449	2,382,127	2,539,357	

Lake Mead Storage and Conservation



Post-2026 Proposed Schedule



Post-2026 Proposed Action Alternatives

Post-2026 Proposed Action Alternatives

- Lower Division States
- Upper Division States
- Gila River Indian Community
- Conservation Cooperative
- Cooperating Agencies (NPS-FWS)
- City of Phoenix Concept

Post-2026 Comparative Alternatives

- No Action
- Continued Current Strategies

Outlook for the 2025 CAP Delivery Supply

DON CRANDALL – WATER CONTROL MANAGER

CAP Annual Operating Plan Timeline

CAP Rate Letter Schedule Request	Jun 18, 2024
August 24 Month Study	Aug, 16 2024
Annual Water Users Briefing	Aug 21, 2024
Water Delivery Requests	Oct 1, 2024
Final Water Schedules	Nov 15, 2024

CAP Delivery Supply Outlook Current Assumptions

2025 Tier 1 Shortage Condition

1,662,429 AF Colorado River Supply Normal Year (TBD)

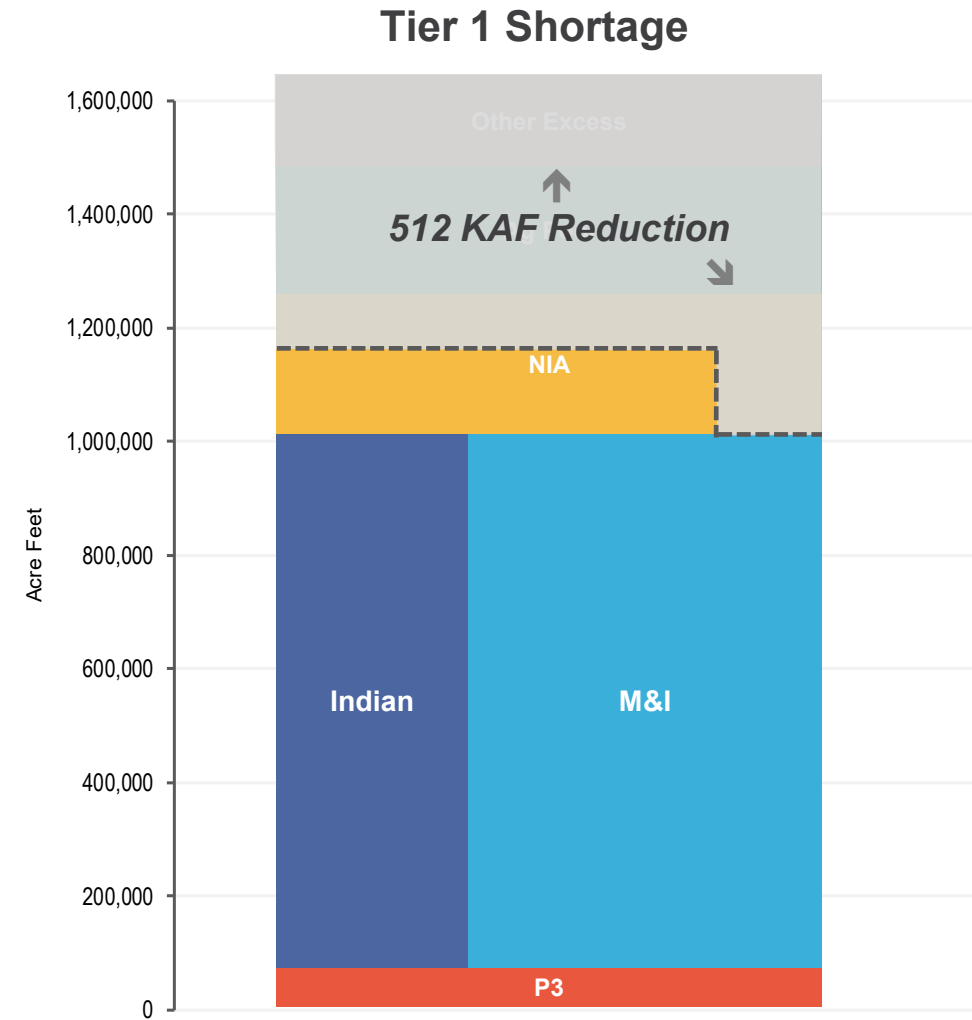
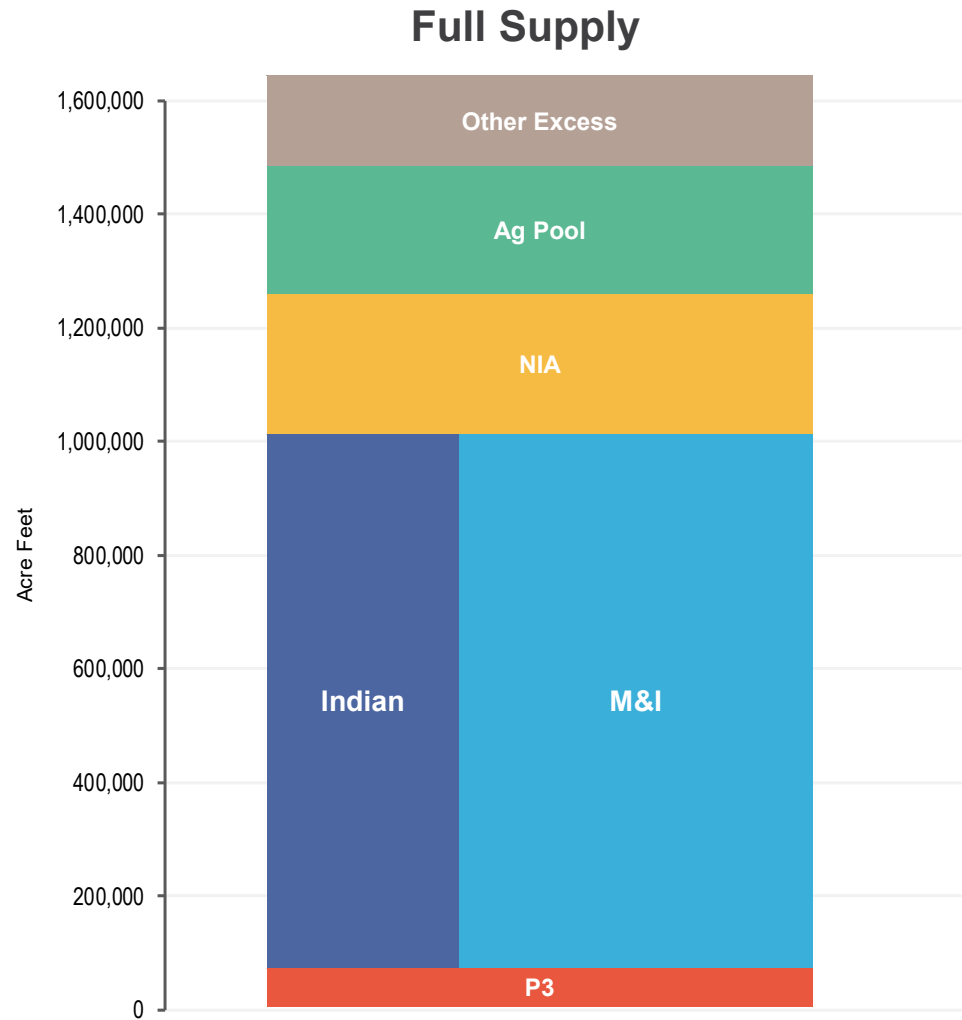
“Available CAP Supply” determination by Reclamation

50,000 Lake Pleasant Base Supply (TBD)

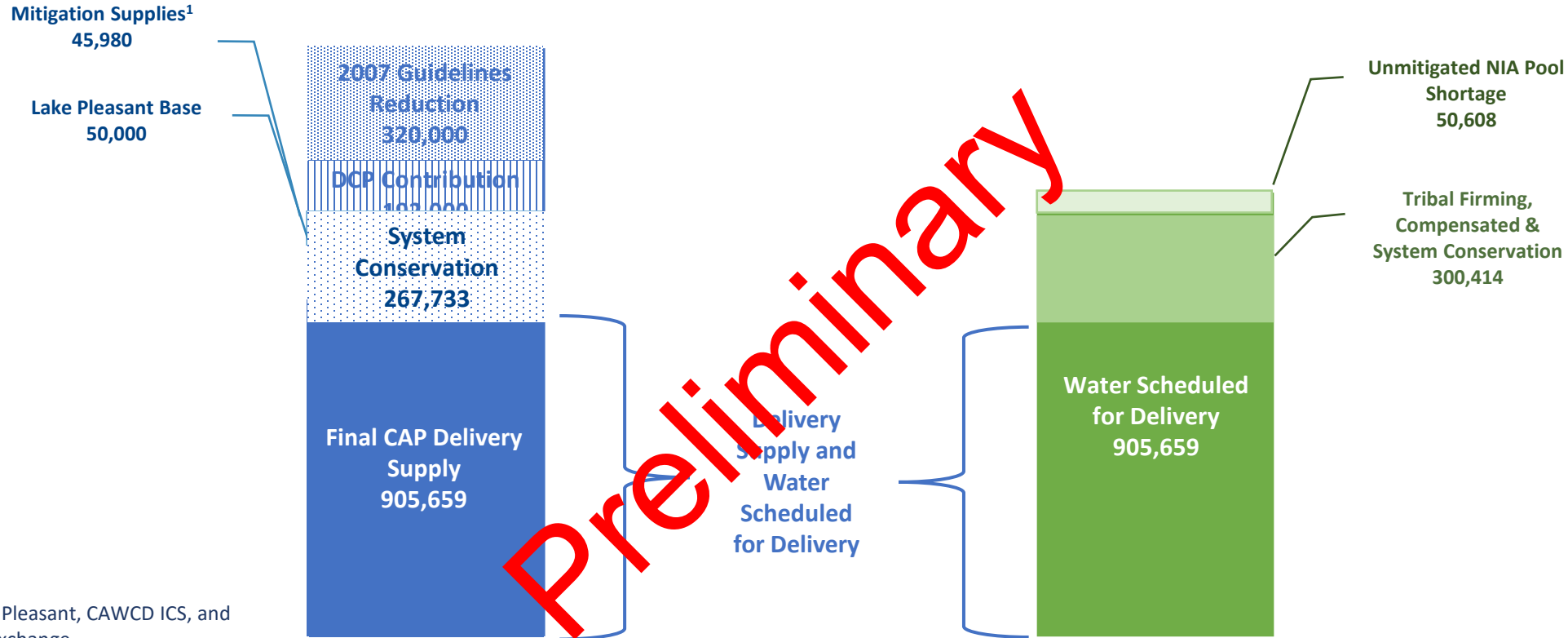
Mitigation per DCP Agreements

10,000 AF SRP DCP Exchange

CAP Water Priority Reductions



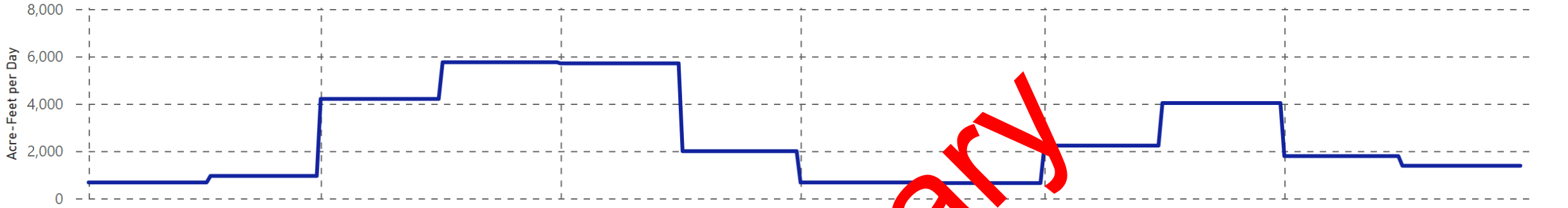
Outlook for the 2025 CAP Delivery Supply



Preliminary

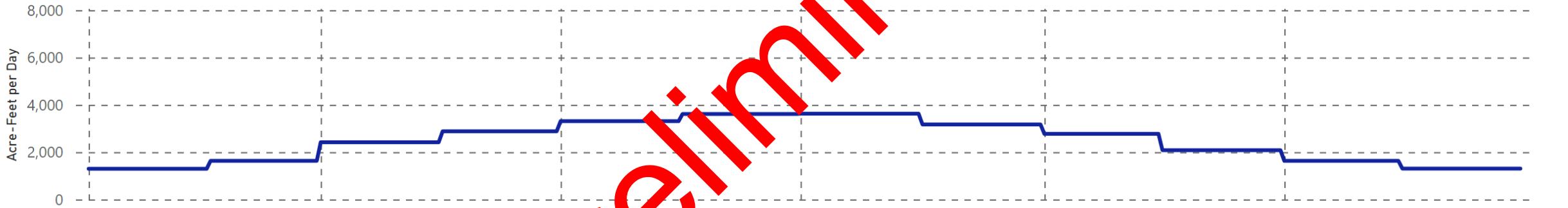
CAP DIVERSIONS

Actual Diversion ● AOP Diversion ● Forecast Diversion



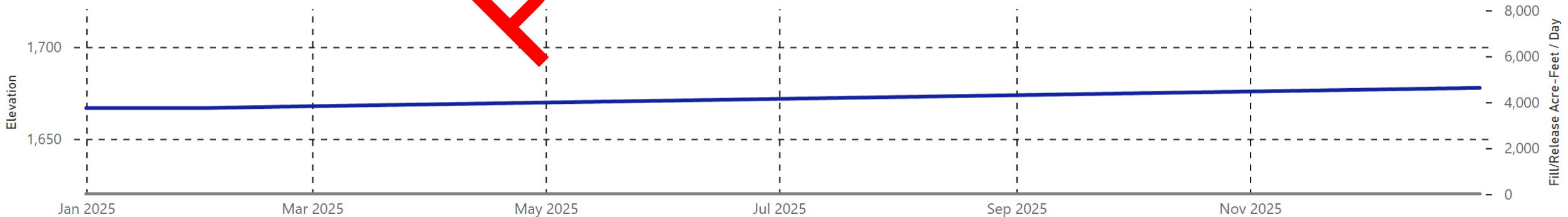
CAP DELIVERIES

Actual Deliveries ● AOP Deliveries ● Forecast Deliveries



LAKE PLEASANT OPERATIONS

Planned Elevation ● Forecast Elevation ● Actual Elevation ● WAD Fill ● WAD Release



Forecast Q3

Preliminary

Water Quality and Biology Report

SCOTT BRYAN - WATER QUALITY AND BIOLOGY ADMINISTRATOR

Water Quality Monitoring



Monthly (Table A-1; Priority Constituents)

- Samples at 6 canal locations
- Samples at Lake Havasu and Lake Pleasant
- Vertical profiling at Lake Pleasant
- Algae/Periphyton/Chlorophyll at all locations

Semi-Annual (Table A-2; Rare)

- Samples at 3 canal locations
- Samples at Lake Havasu

Continuous Monitoring

- Multiparameter probes at 2 canal locations
- Turbidity sensors at 4 canal locations
- Turbidity sensor at Lake Havasu

Water Quality Trends

Rare Constituents (“Exotic”)

- Just 4 constituents detected in 5 years, all at levels just slightly above detection limits
- No detections in Lake Havasu samples
- Constituents are related to agriculture or manufacturing

“Exotic” Detections	
• 2,4-D	• Ethylene Glycol
• Acetaldehyde	• Formaldehyde



Water Quality Trends

PFAS (“Forever Chemicals”)

- Sampled semi-annually from 2020-2023; now monthly samples
- EPA indicates there are nearly 15,000 PFAS compounds
- CAP samples for 18 compounds
- Detected 5 times over past 5 years, all at very low levels (~2 ppt)
- No detections in Lake Havasu

PFAS Detections

- PFOA
- PFHxA
- PFUnA
- PFHxS



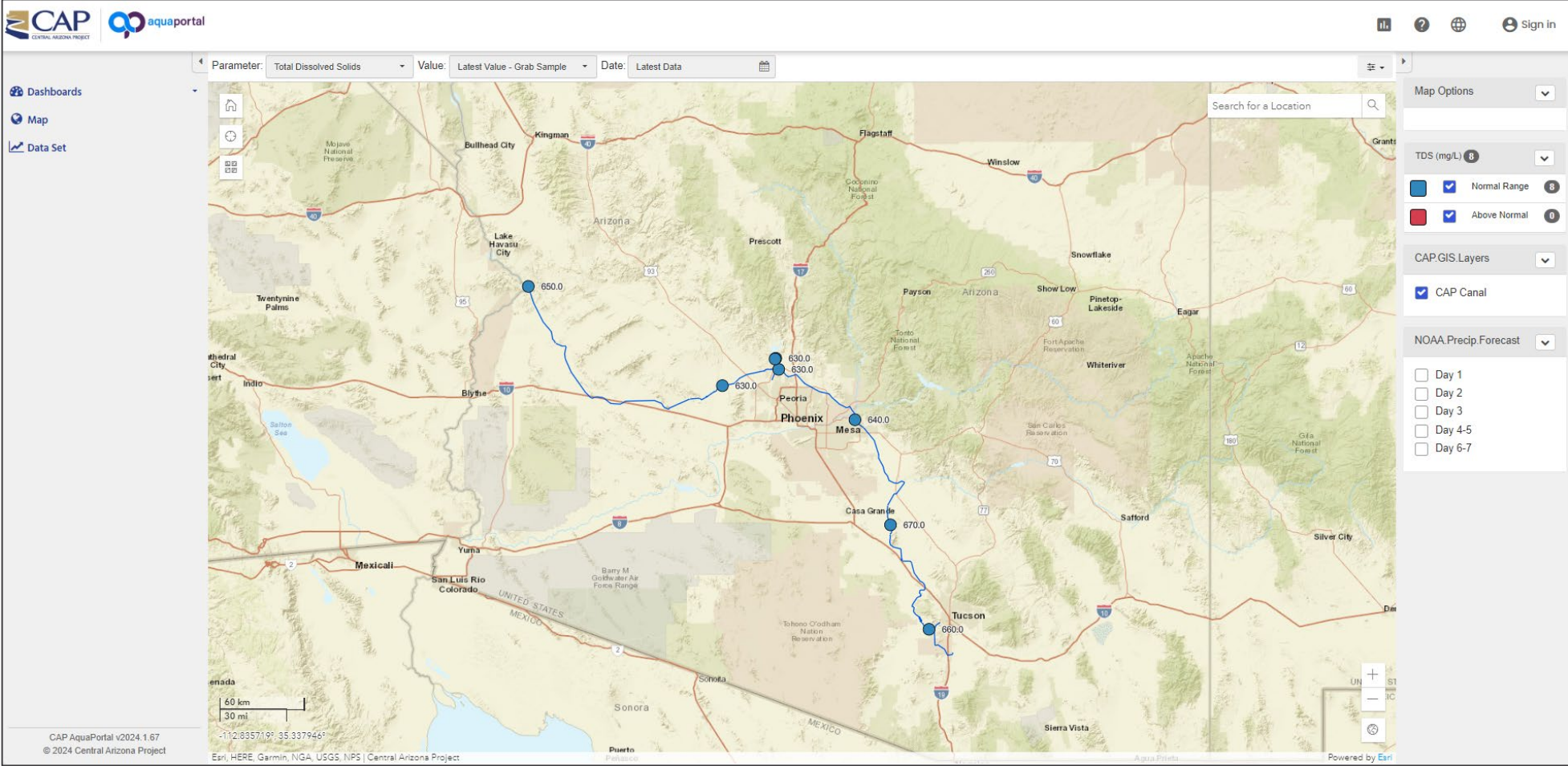
Continuous Sensors (Real-Time)

- Multiparameter sensors (Hydrolab) have been running for 6 years
- Current turbidity sensors (FTS) will no longer be supported
- Project to replace sensors, installation, and communications over the next 2 years



AquaPortal

aquaportal.cap-az.com



Alamo Lake Releases

2023



2024

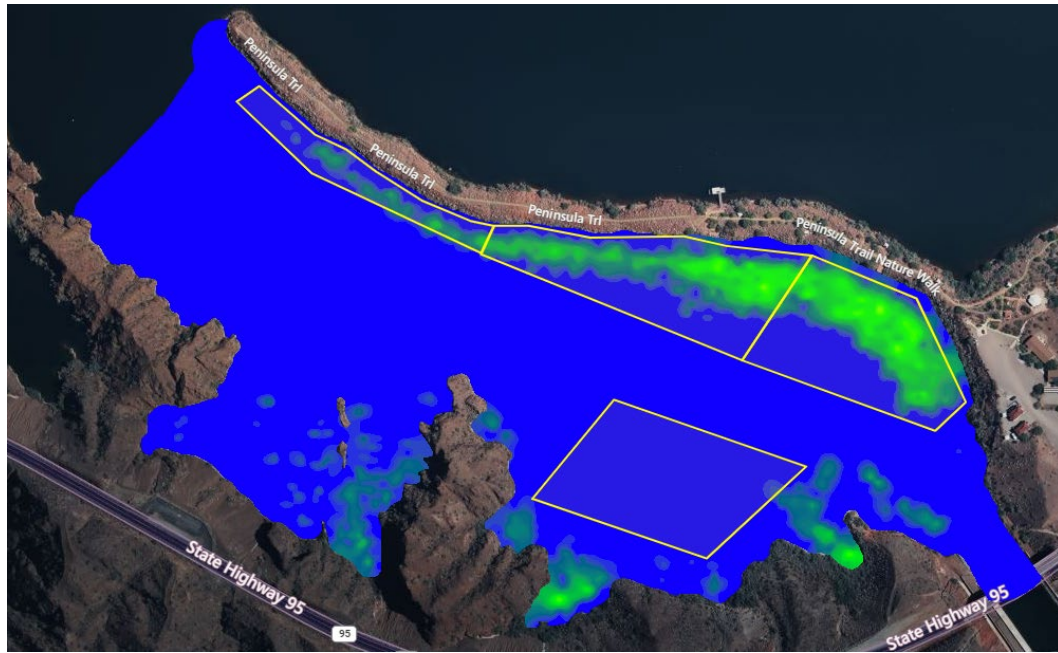


Alamo Lake Releases

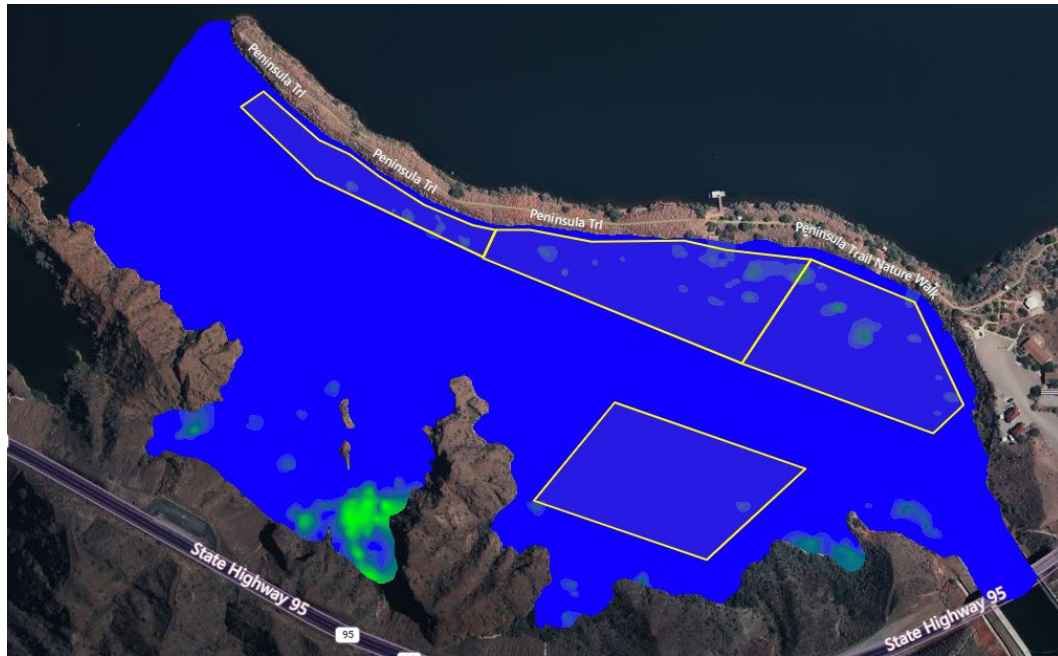


Vegetation Treatment

Pre-treatment
June 18, 2024



Post-treatment
July 23, 2024



Quagga Mussels



Algae/Rock Snot



Phoenix Valley Water Treatment Operators Semi-Annual Meeting and Tour



April 2024

- Met at San Tan Vista Water Treatment Plant (SVWTP)
- 27 attendees from 7 different water agencies
- Participants toured the facility after the meeting

Goals:

- Discuss challenges treatment plant operators are experiencing around the valley
- Network and improve communication between CAP and our stakeholders
 - *Topics included expansions and growth, augmentation of water supplies, water conservation efforts, and hiring challenges*

Break– 10 Minutes

Send Questions to: questions@cap-az.com

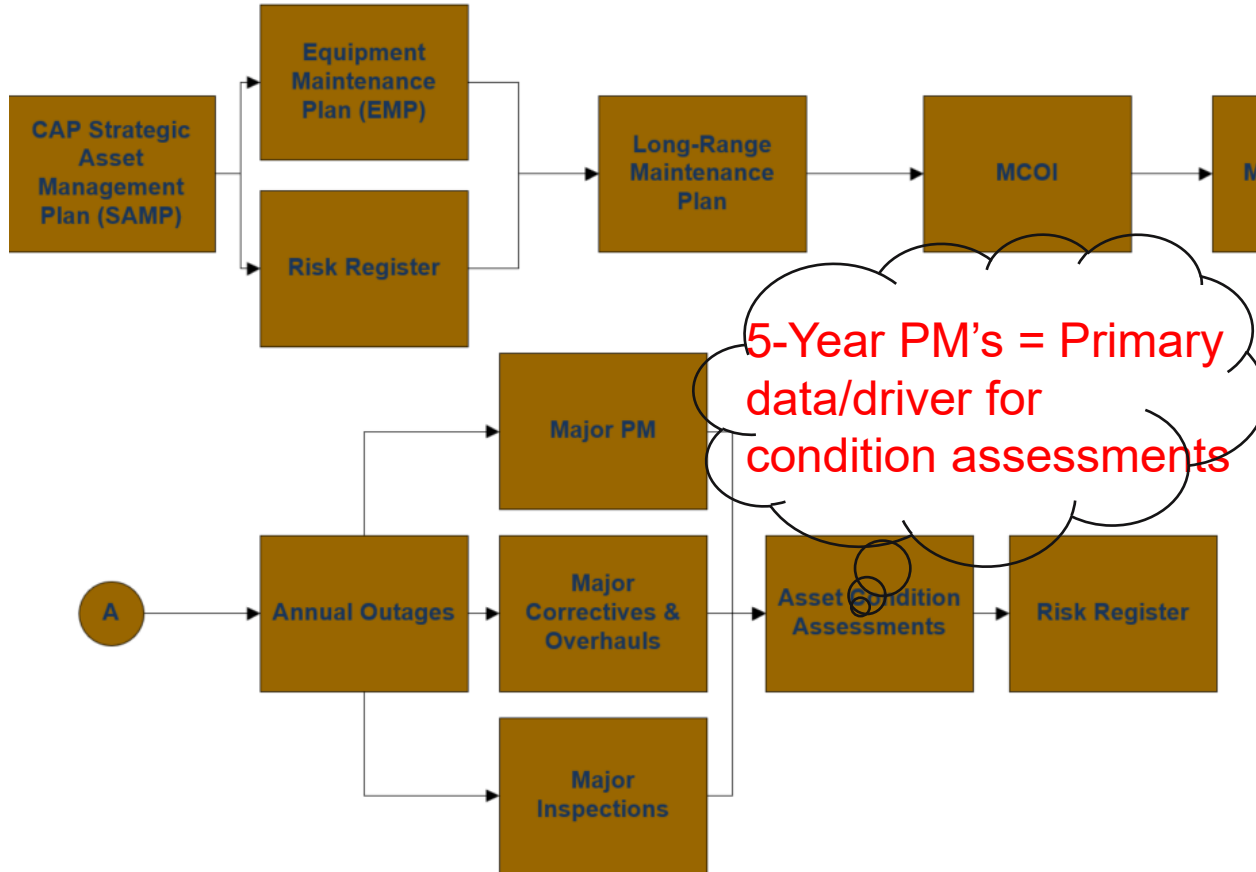
2024/2025 Maintenance Operations

ROBERT HITCHCOCK— MAINTENANCE CONTROL MANAGER

CAP Uptime Award 2023 – “Best Work Management Program”

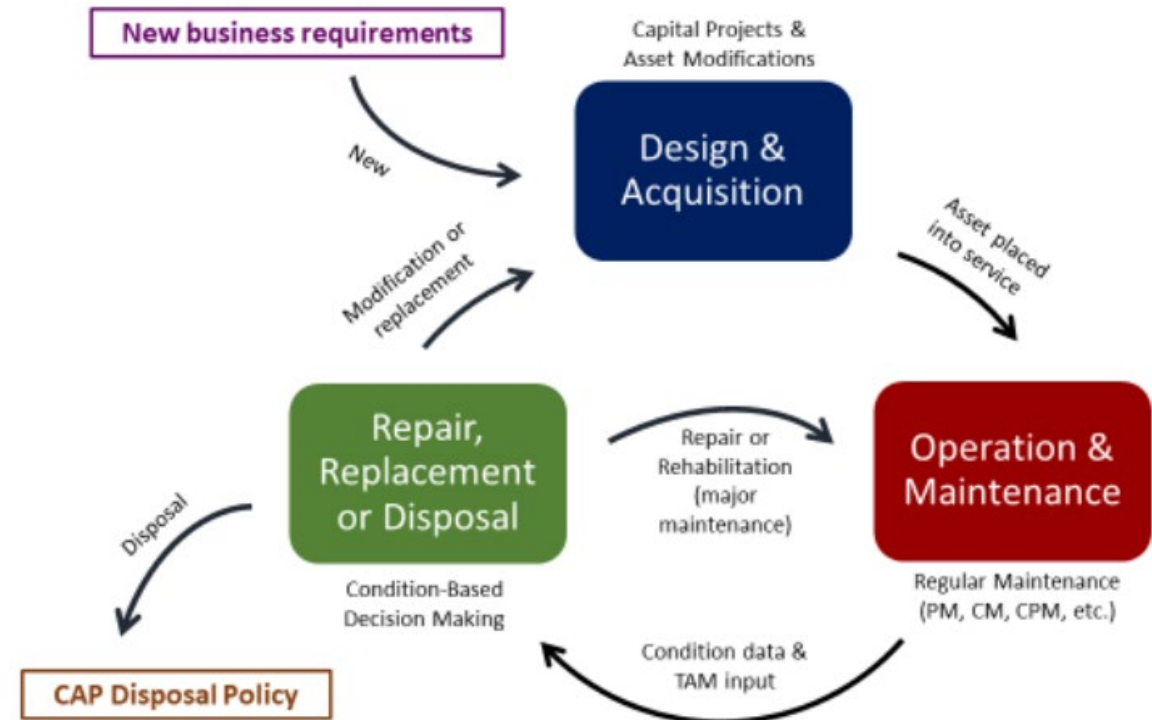


Long-Range Planning at CAP



SAMP Prescribes that CAP Maintenance Will have an Annual Maintenance Plan (AMP) baselined and published before the end of the year for the following year.

CAP SAMP



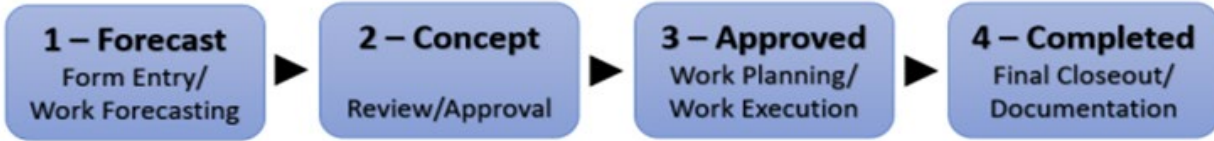
Equipment Maintenance Plan (EMP)

- Defines Scope and Frequency of Maintenance Tasks, Inspections, Testing, and Condition Assessments.
- Assign Craft Trades and Work Estimates
- Identify Procedure Nesting Requirements
- Establish Procedure Start Date that aligns with our operating context

Object Parent: MWPU01																									
Asset Position System	Equipment ID	Equipment Description	Nesting Reference	PM ID	PM Description	PM Priority	PM Comp. Duration	W/O Evt Duration	PPM Document Description	Activity ID	Activity Trade	People Required	Estimate in Hours_SUM	Activity Duration	PM Due Date	PM Compliance Date	On Week Day	Equipment MRC	PM MRC	WO Parts MRC Override	Equipment Loc				
P	MWPU01MTR	Unit 1 Motor	MWPMT001	MWPMT001-6	MWP_Unit Motor 6 Year PM	6	120	4	[> Mark Wilmer Unit Motor Test Plant Support 6 Year Procedure <]	10	ELE	1	40	4	10-Jun-2024	08-Oct-2024	2 - 1	831	831		MWP				
						6						20	MEC	1	10	1	10-Jun-2024	08-Oct-2024	2 - 1	831	831		MWP		
								MWPMT001-5	MWP_Unit Motor Semi-Annual PM	6	36	1	[> Mark Wilmer Unit Motor Oil Sample Semi-Annual Procedure <]	10	ELE	1	2	1	11-Dec-2023	16-Jan-2024	2 - 1	831	831		MWP
								MWPMT002-6	MWP_Unit Motor Doble Test 6 Year PM	6	120	1	[> Mark Wilmer Unit Motor Stator Doble Test 6 Year Procedure <]	10	ELE	2	10	1	01-Jun-2024	29-Sep-2024	-	831	555		MWP
									6					20			1	01-Jun-2024	29-Sep-2024	-	831	555		MWP	
								MWPMT003-6	MWP_Unit Motor Surface Air Cooler 6 Year PM	6	120	8	[> Mark Wilmer Unit Motor Surface Air Cooler 6 Year Procedure <] [> Mark Wilmer Unit Motor Surface Air Cooler Eddy Current Scope of Work 6 Year Pro <]	10	ELE	1	8	1	01-Jun-2024	29-Sep-2024	-	831	831		MWP
								MWPMT004-6	MWP_Unit Motor Upper Guide Bearing Oil Cooler 6 Year PM	6	120	8	[> Mark Wilmer Unit Motor Upper Guide Bearing Oil Cooler 6 Year Procedure.pdf <]	10	MEC	3	120	8	01-Jun-2024	29-Sep-2024	-	831	831		MWP
									6					20	ELE	1	10	1	01-Jun-2024	29-Sep-2024	-	831	831		MWP
								MWPMT004-A	MWP_Unit Motor Partial Discharge Annual PM	4	72	1	[> Mark Wilmer Unit Motor Partial Discharge Test Annual Procedure.pdf <]	10	ELE	2	15	1	01-Feb-2024	13-Apr-2024	-	831	555		MWP
									4					20			1	01-Feb-2024	13-Apr-2024	-	831	555		MWP	

Risk Register (Major Non-PM)

Concept Forms follows four phases from forecast to completion:



Record View Comments x Documents x Details x Budget x

Concept Request Form: 10078 CAP Service Area Hydrologic Evaluation Update

Status:

Phase: 3 - Approved

Equipment:

SAM Team:

Concept Type:

Location:

Planner:

Labor Hours:

Total Non-Labor Costs:

Work Duration (Days):

Outage Class:

Work Order MRC:

Work Order Type:

Work Management MRC:

Comments Required:

Unfinished:

Imported:

Priority:

Consequence of Failure Score:

Probability of Failure Score:

Equipment Condition:

Obsolescence Risk:

Eng Staff Needed:

Eng Proj Delivery Time:

Engineering Notes:

RPN:

PPN:

Concept Type

Select a record, and then click OK.

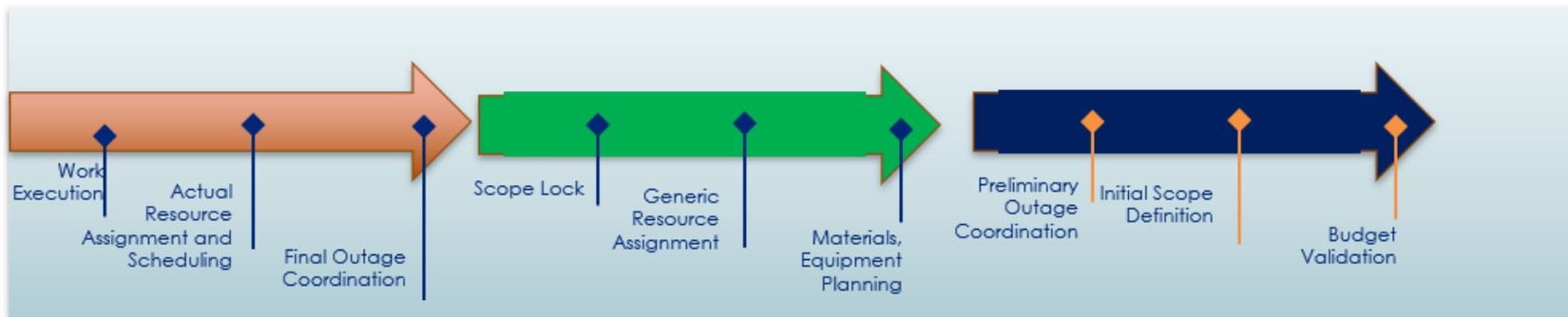
(default)

Code/Asset	Description
[R] <input type="text"/>	[R] <input type="text"/>
Asset Modification	Asset Modification
Budget Request	Budget Request
Capital Budget Request	Capital Budget Request
Eng Svcs Request	Eng Svcs Request
Overhaul	Overhaul
Project Request	Project Request
Replacement in Kind	Replacement in Kind

Consequence of Failure				Score	Risk Priority Number Matrix					
Loss of Available Capacity (MTR)	Business Impact / Cost	Environmental, Health and Safety Impacts			Risk Priority Number = Consequence Score + Failure Rate Score					
Capacity loss for over 30 days.	Economic loss exceeding \$10M	Loss of life	Catastrophic	8	9	10	11	12	13	14
Capacity loss for 10 to 30 days.	Economic loss of \$1M to \$10M or business impact exceeding 5000 employee hours	Severe injury or major environmental impact.	Critical	6	7	8	9	10	11	12
Capacity loss of 1 to 10 days.	Economic loss of \$100K to \$1M; business impact of 500 to 5000 employee hours	Minor injury or environmental impact.	Severe	4	5	6	7	8	9	10
Capacity loss of 6 hours to 1 day.	Economic loss of \$10K to \$100K or business impact of 50 to 500 employee hours	Non-immediate safety issue or minor environmental impact.	Serious	2	3	4	5	6	7	8
Capacity loss of 1 to 6 hours.	Economic loss of \$1K to \$10K or business impact of 10 to 50 employee hours	Potential safety or environmental impacts if not corrected.	Moderate	1	2	3	4	5	6	7
Capacity loss of less than 1 hour.	Economic loss less than \$1K or business impact of less than 10 employee hours	No safety or environmental impacts.	Negligible	0	1	2	3	4	5	6
				Score	1	2	3	4	5	6
				Failure Rate	< 50 Years	30-50 Years	10 - 30 Years	1-10 Years	6mo - 1 Year	> 6mo
				EOI/Obsolescence Estimate	> 12 yrs	> 10 ≤ 12 yrs	> 8 ≤ 10 yrs	> 5 ≤ 8 yrs	> 2 ≤ 5 yrs	≤ 2 yrs
				Likelihood of Failure						

Forward Planning at CAP

- Ready Phase – Week 1 through 6
- Approaching Phase – Week 7 through 12
- Future Phase – Week 13 through 48 Months

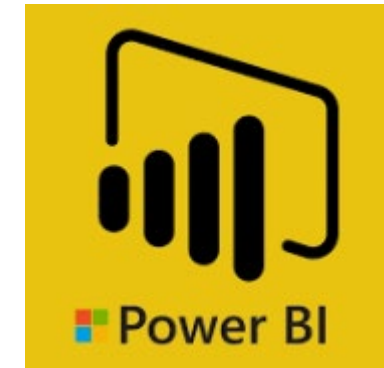


Forward Planning is simply the process of ensuring that all planned work has a future “most probable” scheduled work execution start date (whether long range future work or ready work in the backlog).

Maintenance and Capital Operational Impacts (MCOI)

Project Name	Start	Finish	Eng Capital Pha	%	RPN	Owner	Last Published	EFP
Eng Capital Phase:	3/6/2023	8/7/2025						
610337 Noise Reduction Phase 2 MWP	3/6/2023	3/20/2024		0%		Marco Pineda	8/22/2023	
610344 BMY & HDQ Multi-Use Buildings	2/20/2024	6/17/2025		1%		Marco Pineda	3/21/2023	
610349 HDQ Parking Lot Upgrades	1/8/2024	8/7/2025		0%		Marco Pineda	6/26/2023	
Arc Flash 2023	4/10/2023	1/23/2024		2%		Christopher Karpurk	9/26/2023	●
Arc Flash 2024	1/8/2024	12/23/2024		0%		Christopher Karpurk	4/6/2023	●
Eng Capital Phase: Asset Modifications	3/22/2017	12/22/2025						
Arc Flash Studies Mark Wilmer	3/31/2022	2/5/2024	Asset Modificati	91%	1	Christopher Karpurk	7/12/2023	●
Drawing Services Migration	8/23/2018	12/29/2024	Asset Modificati	0%	1	Holly Forden; GISP	8/23/2018	
GIS Knowledge Transfer	10/1/2018	4/3/2023	Asset Modificati	0%	1	Holly Forden; GISP	8/23/2018	
545_NonCapital_Work	1/1/2019	12/31/2024	Asset Modificati	0%		Darren Couturier	4/4/2023	
547 Non Capital Work Plan	1/1/2020	12/29/2022	Asset Modificati	0%		Sami Korpelainen	1/20/2022	
548_Non-Capital_Project_Work	1/3/2018	4/4/2023	Asset Modificati	0%		Jesse Dixon	4/4/2023	
549-Internal_Workload	3/22/2017	12/21/2022	Asset Modificati	19%		Holly Forden; GISP	4/16/2019	
Arc Flash 2025	1/6/2025	12/22/2025	Asset Modificati	0%		Christopher Karpurk	4/6/2023	●
Eng Capital Phase: Project - Closeout	10/29/2018	12/18/2023						
610458_West_Plants_Exciter	4/1/2019	12/18/2023	Project - Closeou	96%	10	Rebecca J. Lewis; P.E	9/20/2023	●
610326 West Discharge Valves	1/7/2019	8/24/2023	Project - Closeou	66%	8	Jason Terrell	9/20/2021	●
610362 MWP HVAC Replacement	3/12/2019	3/8/2023	Project - Closeou	87%	7	Jason Terrell	10/24/2022	●
610328 Potable Water Skid Replacement	10/29/2018	11/27/2023	Project - Closeou	13%	3	Zachary C. Kopp	8/22/2023	●
610395 - HQ Crane Improvements	3/19/2019	4/27/2023	Project - Closeou	0%	3	Zachary C. Kopp	4/25/2023	●
700080 - System Use Agreement Study	6/25/2019	3/10/2022	Project - Closeou	55%	2	Zachary C. Kopp	8/16/2021	●
Eng Capital Phase: Construction	1/8/2018	10/16/2028						
610183 HQ Fire Feeder Valve System	4/29/2020	6/17/2024	Construction	9%	10	Zachary C. Kopp	9/26/2023	●
610180 West Plant Discharge Valve Phase 3	3/10/2021	1/8/2026	Construction	73%	8	Jason Terrell	9/26/2023	●
610317 CBM Project South Plants	4/6/2023	10/29/2025	Construction	0%	8	Rebecca J. Lewis; P.E	9/21/2023	●
610330 - Black Mountain Snyder Hills Check	3/19/2019	2/24/2025	Construction	0%	8	Zachary C. Kopp	9/26/2023	●
610332 MWP Fire Protection Sys and Contro	3/12/2019	10/1/2024	Construction	75%	7	Jason Terrell	9/26/2023	●
710040 MWP Suction Tubes & BSH Right M	3/26/2018	11/30/2023	Construction	45%	7	Tamara Miller	9/26/2023	●
610512 Elevator Phase II - Design Build	11/7/2018	8/1/2024	Construction	43%	5	Jason Terrell	9/26/2023	●
610336 HQ Gate	4/18/2022	4/10/2024	Construction	2%	3	Zachary C. Kopp	7/25/2023	●
610342 TDRP Pilot Recovery Wells	6/21/2022	11/9/2023	Construction	0%	3	Marco Pineda	6/27/2023	●
610473 Sump Pump Level Sensor Replacem	1/8/2018	10/16/2028	Construction	61%	3	Christopher Karpurk	6/28/2023	●
Eng Capital Phase: Design Build & Construction	2/21/2019	3/5/2025		31%			10/3/2023	
610329 WAD PLC-5 Replacement	2/21/2019	3/5/2025	Design Build & C	31%	7	Tamara Miller	10/3/2023	●
Eng Capital Phase: Design	10/8/2018	5/23/2040						
610324_HQ_Control_Center_SCADA_Replace	10/29/2018	12/30/2030	Design	25%	12	Tamara Miller	9/26/2023	●
WAD Fire Pump Replacement	7/19/2022	10/29/2024	Design	0%	11	Darren Couturier	8/16/2023	
610208 TWP-SAN-SNY-BLK Exciter Replacen	6/1/2020	8/8/2024	Design	22%	9	Marco Pineda	8/22/2023	●

 Project Center



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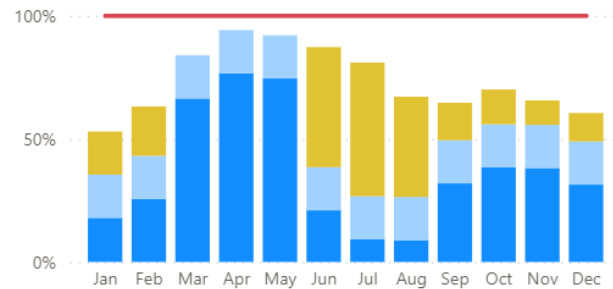
Maintenance and Capital Operational Impacts (MCOI)

MCOI Tables - Plan vs Inyear

MWP BSH LHQ HSY WAD-P WAD-R SGL BRD PIC RED IWP SAN BRW SXV SND BLK

Plan (AOP, Preapproved Outage)

● % Utilization (AOP) ● % Redundancy (Expected) ● % Outage Preap... ● Capacity Full



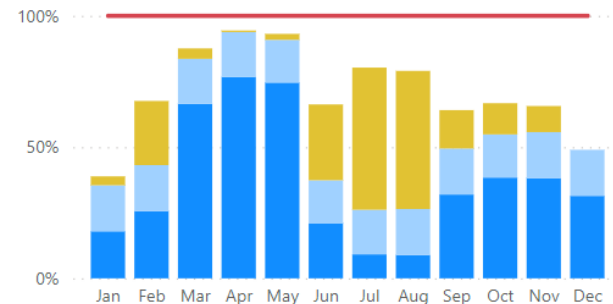
Month	% Utilization (AOP)	% Outage Preapproved
Jan	17.9%	17.5%
Feb	25.6%	20.1%
Mar	66.4%	0.0%
Apr	76.7%	0.0%
May	74.6%	0.0%
Jun	21.0%	48.8%
Jul	9.2%	54.3%
Aug	8.9%	40.7%
Sep	31.9%	15.2%
Oct	38.4%	14.1%
Nov	38.2%	9.9%
Dec	31.4%	11.5%
Total	36.7%	19.4%

Outage Description	Start	Finish	Outage Class
MWP Transformer KW1A Pilot Relay Construction O...	1/9/2023	1/24/2023	OROP
MWP U04 6yr PMs Outage Suite	1/30/2023	7/3/2023	ORRC
MWP - Unit 4 Pump Mechanical Maintenance Supp...	2/2/2023	2/10/2023	ORRC
MWP Unit 3 Pilot Relay Construction Outage	2/6/2023	2/16/2023	ORRC
MWP FP - Transformer Deluge @ KW2A - (Unit 3 & ...	3/6/2023	6/21/2023	OROP
MWP - HP Left - Seasonal	6/1/2023	8/25/2023	ORSE
MWP - 2023 Annual Forebay Weed Treatment (TBD ...	6/15/2023	6/19/2023	ORFP
MWP - 2023 Seasonal Summer Outage - Left	6/19/2023	8/30/2023	ORSE
MWP - Unit 3 Pump Mechanical Maintenance Supp...	6/19/2023	7/5/2023	ORRC
MWP - HP Left - Seasonal for Reline Project	6/19/2023	9/19/2023	ORSE
MWP FP - Transformer Deluge @ KW1A - (Unit 1 & ...	6/21/2023	9/11/2023	OROP
MWP FP - NOVEC Motor Room Install - (Unit 2) - 8...	6/26/2023	7/10/2023	ORRC
MWP - Unit 4 Motor 6 Year PM	7/10/2023	7/27/2023	ORRC
MWP FP - NOVEC Motor Room Install - (Unit 3) - 8...	7/10/2023	7/20/2023	ORRC
MWP - Unit 1 Mechanical Seal Replacement	7/17/2023	12/14/2023	ORRC

Intrayear (Forecast, Infor outage reservations, Actuals)

■ Approved
■ Requested

● % Util (Actual) ● % Util (Foreca... ● % Redunda... ● % Outage Int... ● Capacity Full



Month	% Utilization (A-F)	% Outage Intrayear
Jan	17.9%	3.4%
Feb	25.6%	24.4%
Mar	66.4%	4.0%
Apr	76.7%	0.6%
May	74.6%	2.3%
Jun	21.0%	28.9%
Jul	9.2%	54.2%
Aug	8.9%	52.6%
Sep	31.9%	14.6%
Oct	38.4%	11.9%
Nov	38.2%	9.9%
Dec	31.4%	0.0%
Total	36.7%	17.2%

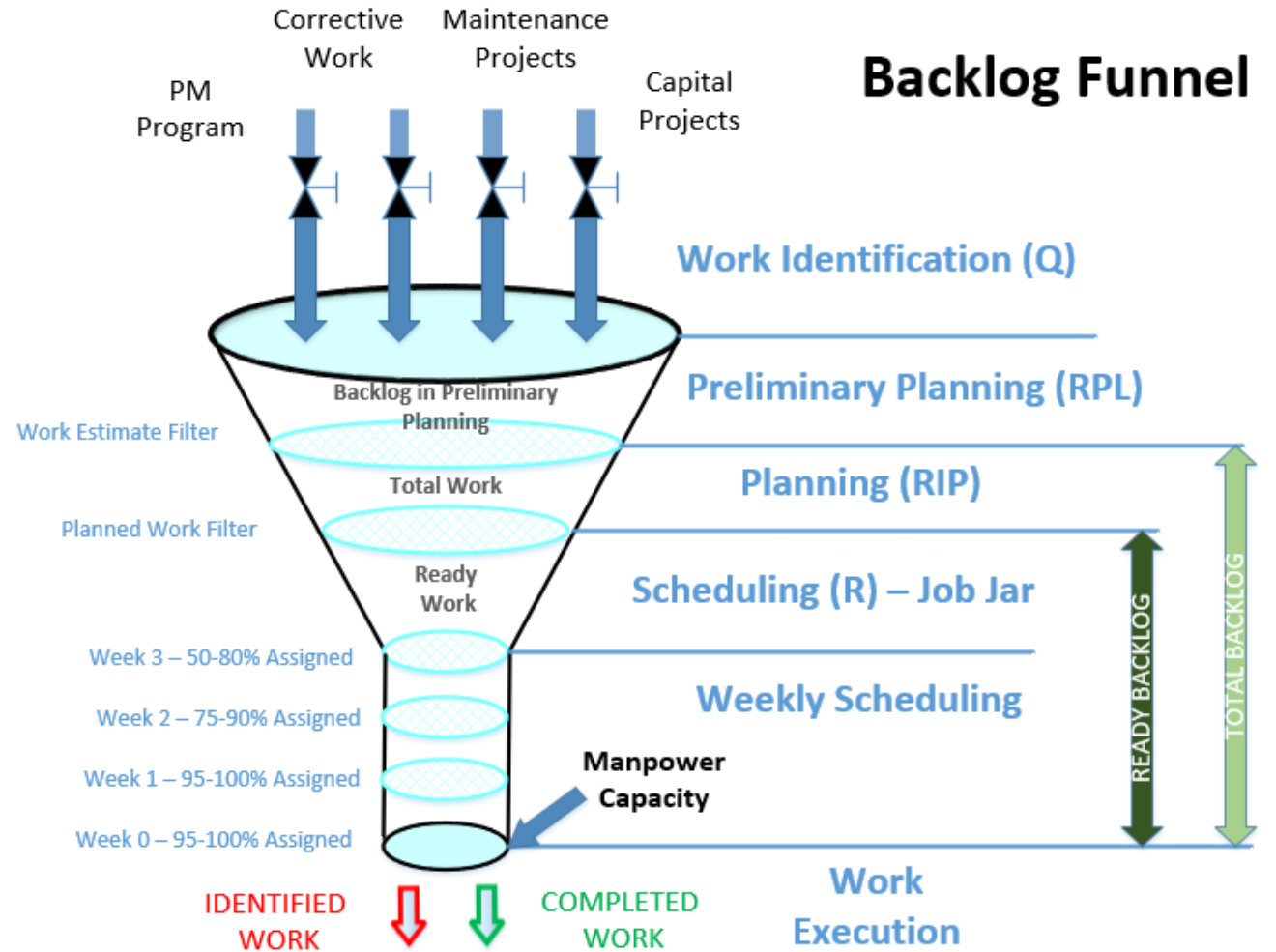
Outage Description	Estimated Start Date	Estimated End Date	Plant Outage	Status Description
Plant Support for MWP_ Units 1-6 Videoscope Air C...	12/19/2022	12/21/2022		Completed
MWP KW1A Transformer EM Relay Replacement (O...	1/9/2023	1/23/2023		Completed
MWP_Unit Exciter Brush Housing Annual PM	1/23/2023	1/26/2023		Completed
MWP U04 6yr PMs Outage Suite	1/30/2023	2/28/2023		Completed
MWP Unit 3 EM Relay Replacement (Outage Request)	2/6/2023	2/16/2023		Completed
610332 - Fire Protection - Deluge Install KW2A Outa...	3/1/2023	3/1/2023		Outage Res...
Fire Protection Deluge Project KY1A	3/1/2023	3/1/2023		Completed
MWP_Unit Circuit Breaker Inspection Annual U5	3/7/2023	3/7/2023		Completed
MWP_ U6 oil leak on Service Seal Oil Supply Line/Fit...	3/8/2023	3/8/2023		Completed
MWP_ U2 Replace Exciter Filters	3/22/2023	3/22/2023		Completed
MWP_U5 Service Seal leaking	3/27/2023	3/30/2023		Completed
MWP_Unit 5 oil leak in air seal	4/25/2023	4/25/2023		Completed
MWP_U2_Possible Loose Connections	5/2/2023	5/2/2023		Completed
MWP_U6_Possible Loose Connection	5/3/2023	5/3/2023		Completed



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Weekly Scheduling Process

- Weekly Planner-Supervisor Meeting
- Scheduling Goals
 - Week 0 (the current week) – 95-105% capacity – hard scheduled (to the employee)
 - Week 1 (next week) – 95-105% capacity – hard scheduled (to the employee)
 - Week 2 – 75-90% capacity – soft scheduled (to the trade)
 - Week 3 – 50-80% capacity – soft scheduled (to the trade)



3 Week Look Ahead Schedule

Outage Class Legend:

- ORFP - Full Plant Outage
- OROP - Operational Outage
- ORHP - Half Plant Outage

Week of 10/23/2023									
CM		NM		OWO		PM		CPM	
247 hrs	68.4%	38 hrs	10.5%	35 hrs	9.7%	26 hrs	7.2%	15 hrs	4.2%

						10/16					10/23					10/30				
						M	T	W	T	96%	M	T	W	T	100%	M	T	W	T	150%
Employee-Week-Work Orders	Equipment	Related CM/CPM	Status	Type	PM Due	10/16	10/17	10/18	10/19	Total	10/23	10/24	10/25	10/26	Total	10/30	10/31	11/01	11/02	Total
<input type="checkbox"/>																				
<input checked="" type="checkbox"/> Unassigned																				
<input checked="" type="checkbox"/> ELE						50	50	50	50	200	50	50	50	50	200	90	70	70	70	300
<input checked="" type="checkbox"/> Unassigned																40	20	20	20	100
<input checked="" type="checkbox"/> Bridgeman, Timothy B (1510)						10	10	10	10	40	10	10	10	10	40	10	10	10	10	40
<input checked="" type="checkbox"/> Crane, Rory D (387)						10	10	10	10	40	10	10	10	10	40	10	10	10	10	40
<input checked="" type="checkbox"/> Johnson, Jakob M (1533)						10	10	10	10	40	10	10	10	10	40	10	10	10	10	40
<input checked="" type="checkbox"/> Maldonado Rubio, Felipe (1529)						10	10	10	10	40	10	10	10	10	40	10	10	10	10	40
<input checked="" type="checkbox"/> Nordyke, Brock J (1511)						10	10	10	10	40	10	10	10	10	40	10	10	10	10	40
<input checked="" type="checkbox"/> MEC						30	30	30	30	120	30	30	30	30	120	62	50	50	50	212
<input checked="" type="checkbox"/> Unassigned																32	20	20	20	92
<input checked="" type="checkbox"/> Dickinson, Edward L (835)						10	10	10	10	40	10	10	10	10	40	10	10	10	10	40
<input checked="" type="checkbox"/> League, Alan E (737)						10	10	10	10	40	10	10	10	10	40	10	10	10	10	40
<input checked="" type="checkbox"/> Maestas, Richard J (761)						10	10	10	10	40	10	10	10	10	40	10	10	10	10	40
<input checked="" type="checkbox"/> MWK						8	9		10	27	11	10	10	10	41	3	10	10	5	28
<input checked="" type="checkbox"/> Whitman, Gary L (1313)						8	9		10	27	11	10	10	10	41	3	10	10	5	28
Assigned/Scheduled Totals						88	89	80	90	347	91	90	90	90	361	155	130	130	125	540
Availability										360					360					360
Utilization										96%					100%					150%

- Planner is responsible for work in week 1-6.
- Supervisor & Crew are responsible for week 0.
- Annual Maintenance Plan items march into the 3-week schedule
- Planner & Supervisor meet each week to lock in next week's 100% capacity loaded schedule



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2024 - Annual Maintenance Plan (AMP)

One Plan - Two Areas of Focus

- 1 All Activities - All Maintenance MRCs
 - **614** Work Orders (3% of total 20k work orders per year - only most critical work)
 - **48,324** planned labor hours (10% of total labor)
 - Reporting to Maintenance Control Manager

- 2 Centralized maintenance Activities and MRCs Only
 - Tied to the Director's Goal
 - **252** Work Orders with **33,374** planned labor hours
 - Reporting to Centralized Maintenance and Reliability Director



2024 - Annual Maintenance Outages Planned

West Summer Outage

June 17th – Aug. 29st

Mark Wilmer Pumping Plant (MWP)
Bouse Hills Pumping Plant (BSH)
Little Harquahala Pumping Plant (LHQ)
Hassayampa Pumping Plant (HSY)



South Fall Outage

Oct. 16th – Nov. 18th

Salt Gila Pumping Plant (SGL)
Brady Pumping Plant (BRD)
Picacho Pumping Plant (PIC)
Red Rock Plant (RED)
Twin Peaks Pumping Plant (TWP)
Sandario Pumping Plant (SAN)
Brawley Pumping Plant (BRW)
San Xavier Pumping Plant (SXV)
Snyder Hills Pumping Plant (SNH)
Black Mountain Pumping Plant (BLK)

Waddell Outage

Sept 16th – Oct. 14th

Waddell Pump/Generating Plant

2024 – Critical Equipment PM's

21 Pump/Motor Main Units 5 Year PM

- 4 complete

12 High Voltage Transformers 5 Year PM

- 7 complete

2 High Voltage BUS 5 Year PM

- In progress

8 High Voltage Switchgear 5 Year PM

- 2 complete

4 Discharge Manifold & Pipeline 5 Year PM

- 2 in progress

New River Siphon ROV Insp. – 15 Year PM

- Complete

13 Turnout Gates 5 Year PM

- 7 complete



2024 – Major Corrective Maintenance



Complete

- WAD – U2,3,7 DV Cylinder Repl.
- Check 14 – Check Gate 1 & 2 Replacement
- MWP – Unit 5 Service Seal Repair
- RED – U1,4,5 Trash Rake Wear Pad Repl.

In-Progress

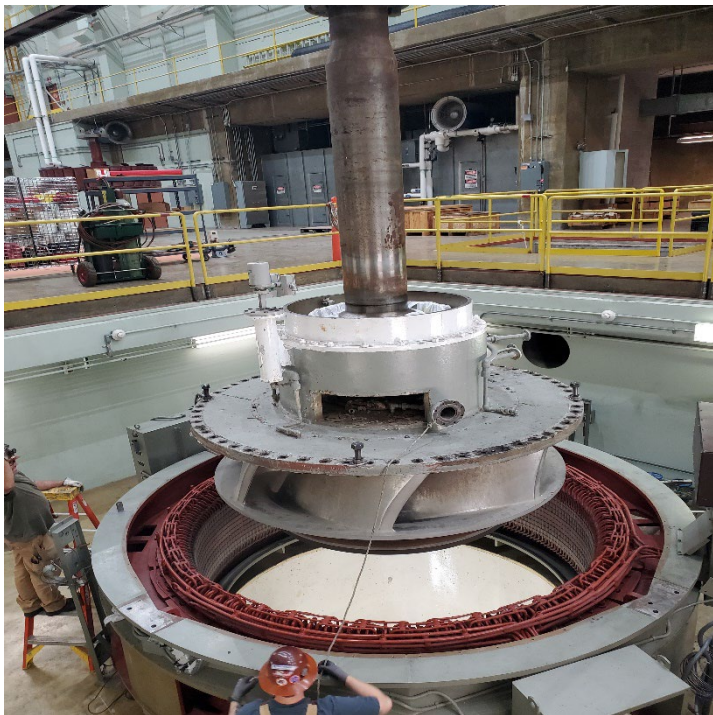
- MWP – U2 Rotor Pole Replacement
- BSH – Unit 8 Discharge Valve Replacement
- BSH – Unit 10 Rotor Pole Crack Repair
- LHQ – Unit 7,8,9,10 Discharge Valve Repl.
- WAD – Circuit Breaker Air Compressor Repl.

Planned

- LHQ – Units 9 Rotor Pole Crack Repair
- HSY – Circuit breaker air system replacement
- WAD – Unit 1 & 3 Cooling Water Strainer Replacement
- WAD – Right Discharge Line Fill Valve Repl.
- WAD – Right Bypass Fill Line Repl.

2024 - Main Pump Unit Overhaul (Planned)

SALT GILA U3



Pump overhaul & Motor Stator Rewind In-Progress

- UST PF and Tip-Up above third alarms.
- End-winding insulation likely has voids.

HASSAYAMPA U2



Pump overhaul & Motor Cleaning Completed

- Wear ring clearances are over 2x design and vibration magnitudes are over 60% of trip settings.

BLACK MOUNTAIN U1



Pump overhaul & Motor Repair Planned

- GST PF above first alarm GST PF Tip-Up above third alarm.
- PD all above third alarm.
- Insulation has void content that is actively discharging.

2025 Siphon and Tunnel outage

WEST WINTER OUTAGE

Jan. 13th – Feb. 13th

Burnt Mountain 15-year PM inspection

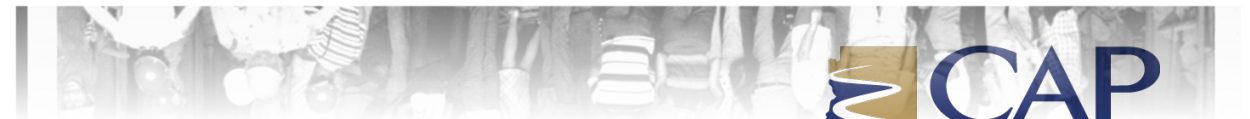
Buckskin Tunnel 15-year PM inspection

Cunningham siphon 15-year inspection



BUCKSKIN TUNNEL

35,771 FOOT COMPLETED IN 1979



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2025 - Main Pump Unit Overhaul (Planned)

HASSAYAMPA U07



Pump overhaul & Motor Cleaning

- Wear ring clearances are over 1.67x design and the condition of the stuffing box bore is poor

PICACHO U04



Pump overhaul & Motor Cleaning

- Fair to Poor casing cover interior condition and poor diffuser vane condition

BRAWLEY U02



Pump overhaul & Motor Repair Planned

- GST PF and PF Tip-Up approaching third alarm, all phases PD above third alarm, Stator PI beyond third alarm. Insulation has void content that is actively discharging.

2025 Capital Improvement Program

RYAN JOHNSON— ENGINEERING MANAGER

Project Steering Committee (PSC)

- Purpose

- Execute the right projects
- At the right time
- For the right reasons
- Evaluate project options – select the most effective solution
- Oversee execution of large projects – compliance with budget, schedule, resource utilization
- Help manage the overall CAP capital budget – seek additional Board authority, if needed

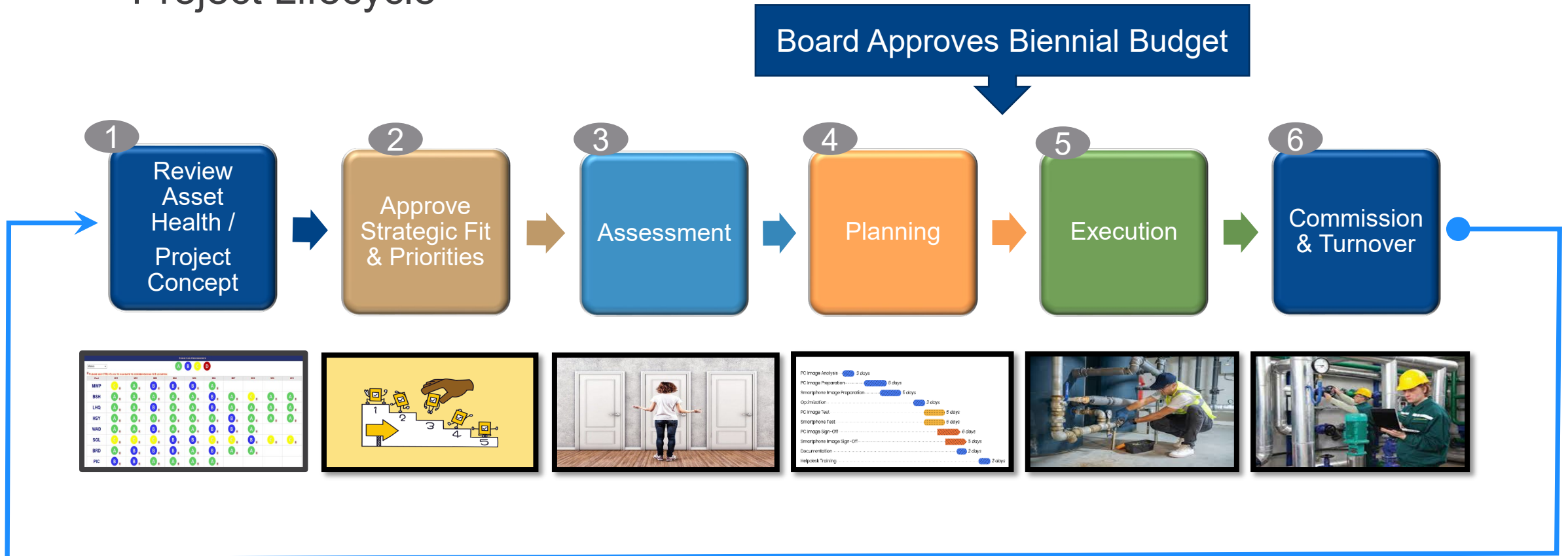
The Central Arizona Project (CAP) has established the PSC to provide portfolio management and facilitate cost effective, consistent, and objective project approval, prioritization, planning, and execution.

Project Steering Committee (PSC)



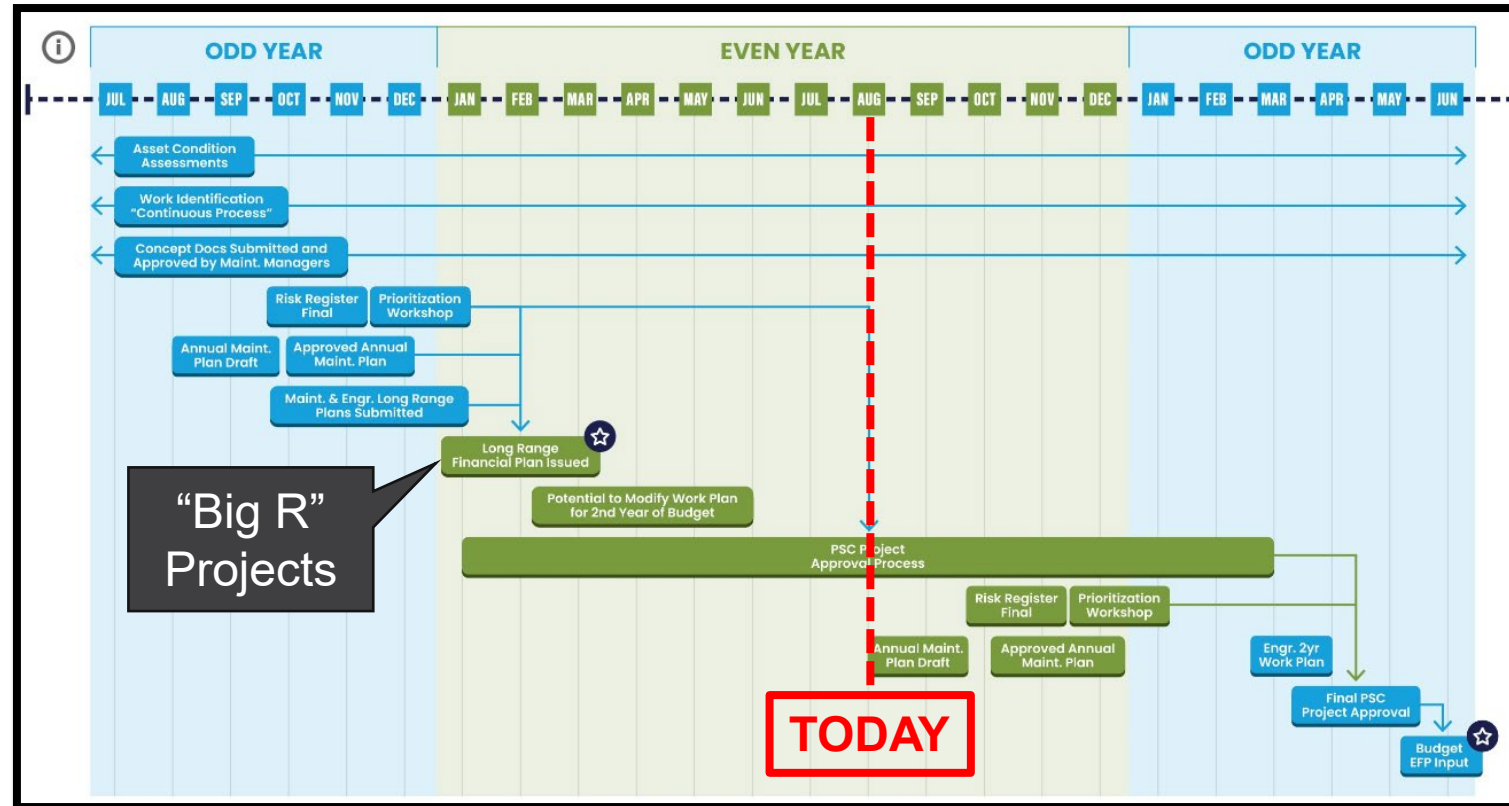
Project Steering Committee (PSC)

- Project Lifecycle



Long Range Work Identification Timeline

- Cyclical planning timeline provides:
 - Prioritized projects
 - Validated timing and needs
 - Long range outage projections
 - Long range financial inputs for “Big R” projects



“Big R” 10-Year Perspective

- Long range financial inputs for “Big R” projects
 - Defined work ensures the best rate is established
 - Recurring process steps to address aging infrastructure and unexpected failures
 - Customers know what to expect

CENTRAL ARIZONA PROJECT
FINAL 2025-2030 RATE SCHEDULE
BOARD APPROVED

June 6, 2024

DELIVERY RATES FOR VARIOUS CLASSES OF WATER SERVICE
Units = \$/acre-foot
(The Letter Designations in the Formulas Refer to the Rate Components Shown Below)

Water Volume (acre feet)	900K	900K	900K	900K	900K	900K	900K
	2024	Firm 2025	Provi- sional 2026	2027	Advisory 2028	2029	2030
Municipal and Industrial Subcontract (B+C)	\$ 270	\$ 295	\$ 304	\$ 306	\$ 322	\$ 335	\$ 350
Federal Contract (B+C)	\$ 270	\$ 295	\$ 304	\$ 306	\$ 322	\$ 335	\$ 350
Agricultural Settlement Pool (C) ¹	\$ 78	\$ 95	\$ 98	\$ 101	\$ 104	\$ 107	\$ 110
Excess (A+B+C) ²	\$ 323	\$ 349	\$ 360	\$ 370	\$ 386	\$ 396	\$ 409
Interstate (A+B+C+D)	TBD	TBD	TBD	TBD	TBD	TBD	TBD

RATE COMPONENTS
Units = \$/acre-foot

Water Volume (acre feet)	900K	900K	900K	900K	900K	900K	900K
	2024	Firm 2025	Provi- sional 2026	2027	Advisory 2028	2029	2030
Capital Charges							
Municipal and Industrial - Long Term Subcontract-Full rate	\$ 72	\$ 69	\$ 67	\$ 64	\$ 64	\$ 61	\$ 59
Board applied taxes to Repayment ³	\$ (19)	\$ (15)	\$ (11)	TBD	TBD	TBD	TBD
(A) Municipal and Industrial - Long Term Subcontract-Net ⁴	\$ 53	\$ 54	\$ 56	\$ 64	\$ 64	\$ 61	\$ 59
Delivery Charges							
Fixed OM&R ⁵	145	150	155	164	177	184	194
“Big R” ⁶	47	40	40	41	41	44	46
(B) Fixed OM&R ⁷	\$ 182	\$ 206	\$ 206	\$ 205	\$ 218	\$ 228	\$ 240
(C) Pumping Energy Rate ⁵	\$ 78	\$ 95	\$ 98	\$ 101	\$ 104	\$ 107	\$ 110
(D) Property Tax Equivalency	TBD	TBD	TBD	TBD	TBD	TBD	TBD
(E) 2020 Voluntary Rate Stabilization ⁸	\$ (11)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

DIRECT UNDERGROUND WATER STORAGE
Units = \$/acre-foot

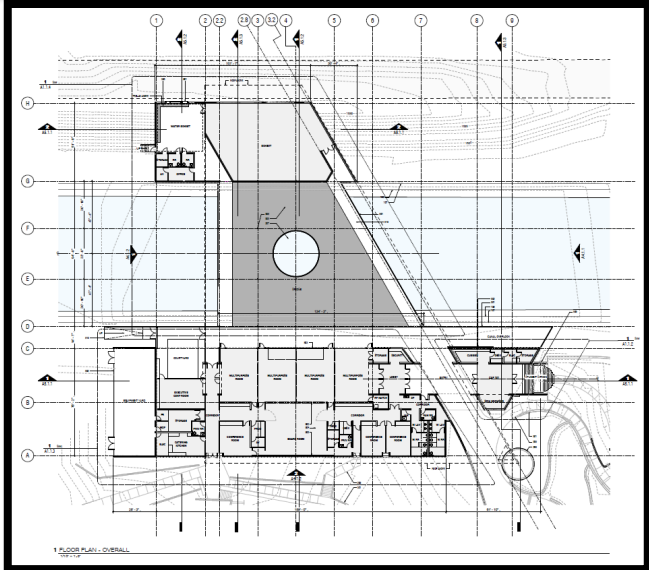
	2024	Firm 2025	Provi- sional 2026	2027	Advisory 2028	2029	2030
	Underground Water Storage O&M ⁷						
Phoenix AMA	\$ 14	\$ 14	\$ 15	\$ 15	\$ 15	\$ 15	\$ 15
Tucson AMA	15	15	15	15	15	15	15
Underground Water Storage Capital Charge ⁸							
Phoenix AMA	\$ 15	\$ 15	\$ 15	\$ 15	\$ 15	\$ 15	\$ 15
Tucson AMA	9	9	9	9	9	9	9



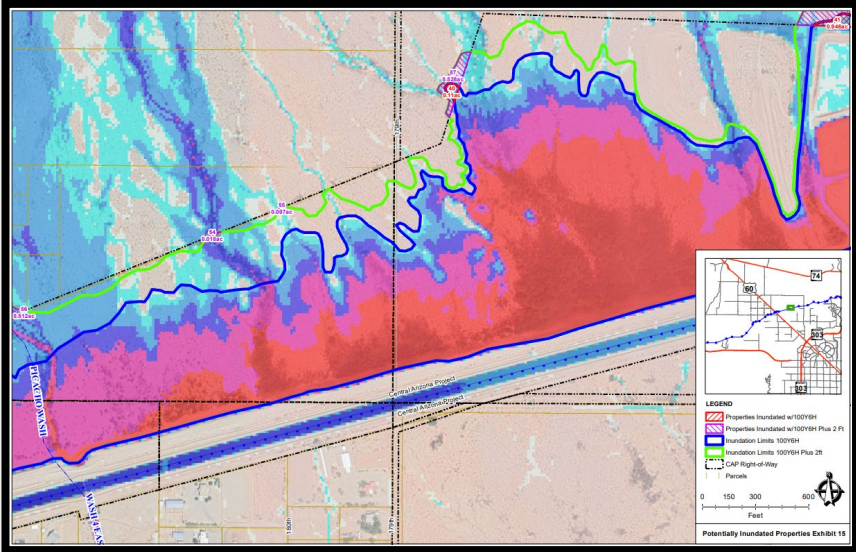
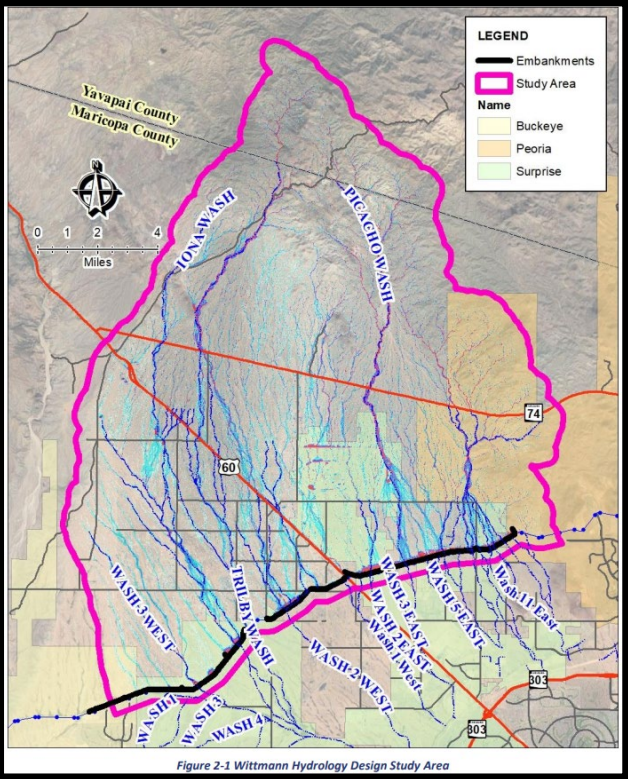
Water Education Center



RENDER VIEW B – STUDENT SIPHON



Aqueduct Hydrology Improvements



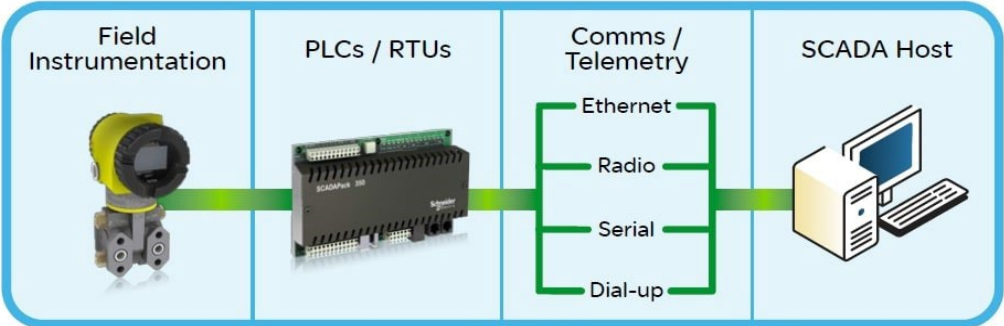
Pumping Plant Generator Replacements



Electromechanical Relay Replacements



SCADA System Replacement



YOUR WATER. YOUR FUTURE.

2025 Energy Outlook

JEFF RITTER—POWER PROGRAM MANAGER

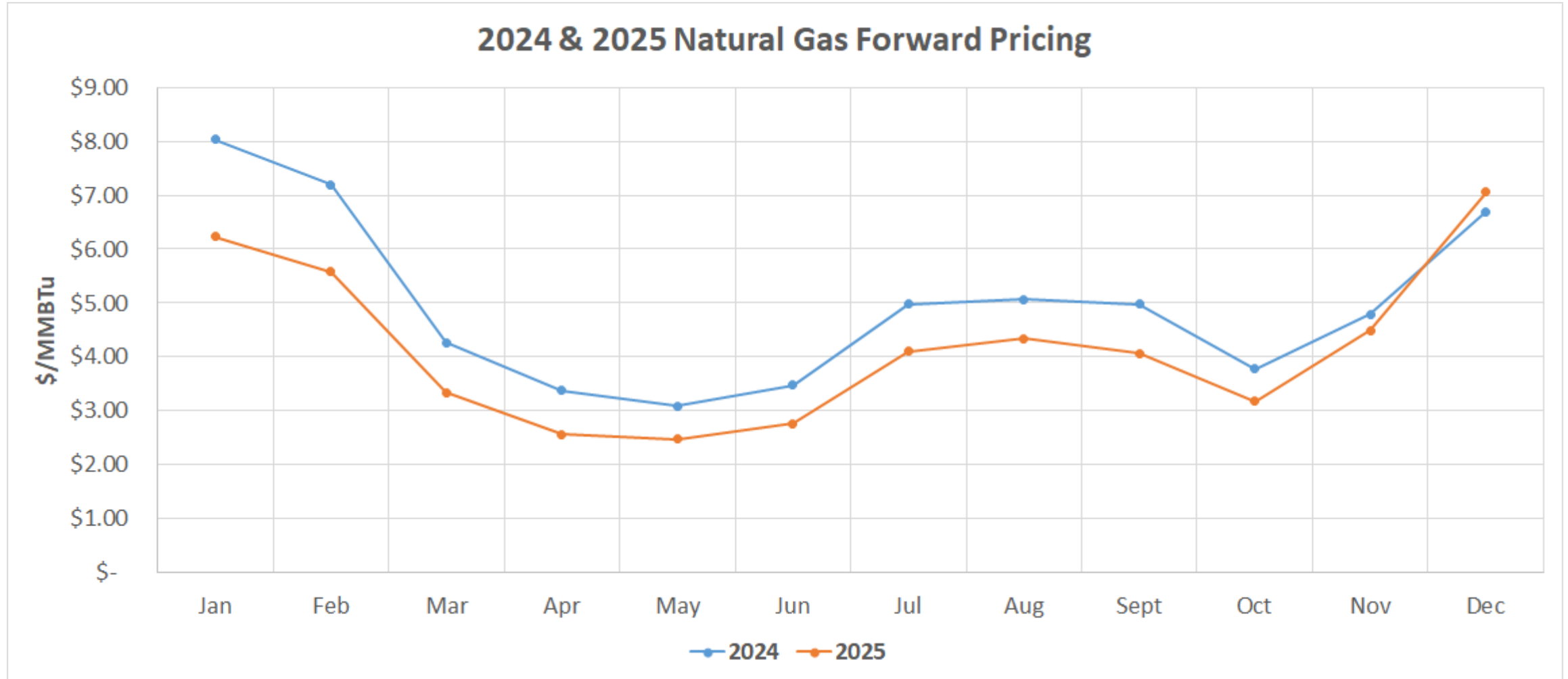
2025 Energy Rate

- \$95/AF, based on:
 - Tier 1 Shortage.
 - Conservation Agreements.
- Projecting less sales of excess energy.



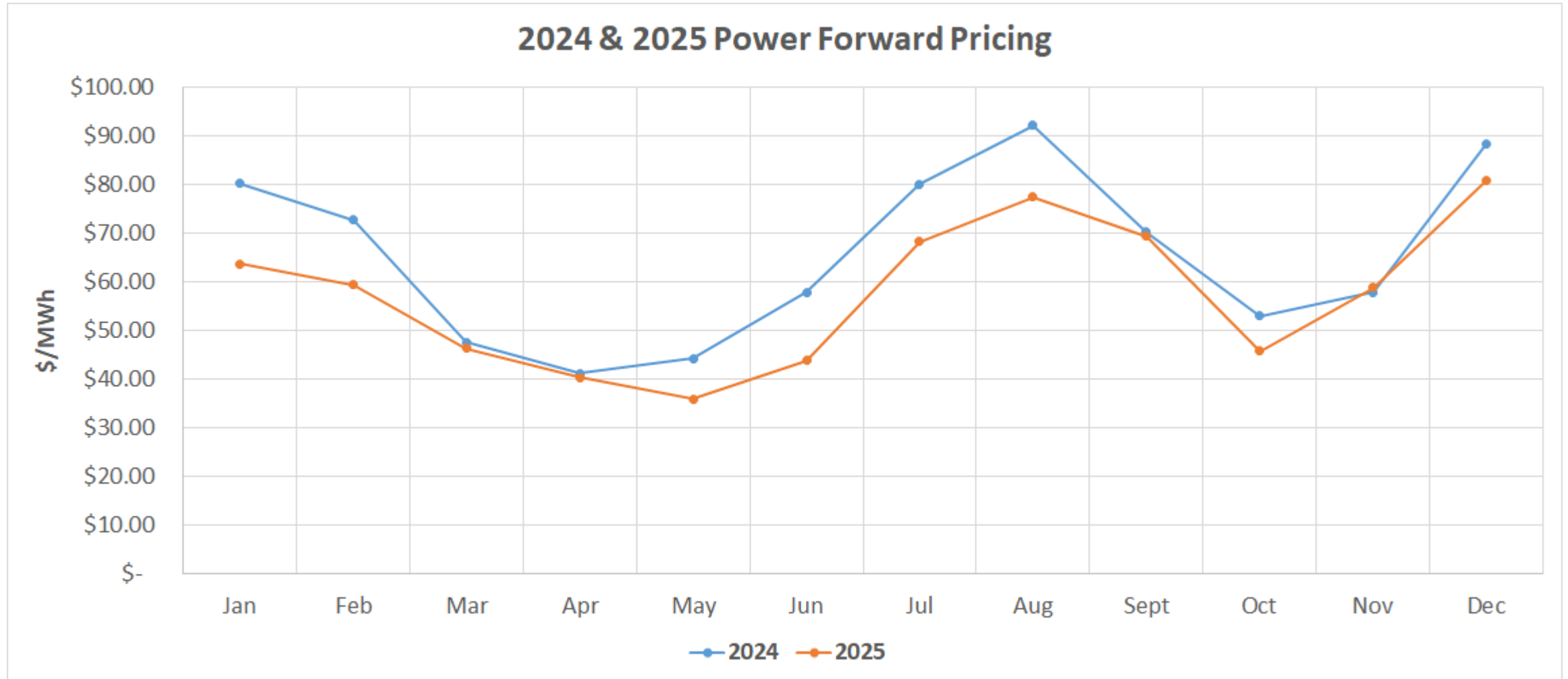
Market Pricing - Gas

- Natural gas price estimates lower than this time last year:



Market Pricing - Power

- Power price estimates also lower:



2025 Risk Analysis

- Acquired ~30% of estimated energy needed.
 - Auction this year to purchase up to 40% of 2025 need.
- Remaining Energy Needs:
 - 50% in Mid-Day Hours: stable pricing, low risk of cost escalation.
 - 50% in Off-Peak Hours: more susceptible to price movement, some risk.
- Overall: In good position to meet 2025 Energy Rate.

Questions?

Send Questions to: questions@cap-az.com



THANK YOU!